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THE DEVELOPMENT OF THE BOW RIVER IRRIGATION PROJECT, 1906-1950

by

Keith Stotyn

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE

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ABSTRACT

At the turn of the century, three major, privately-financed irrigation projects were undertaken in southern Alberta. They were the first products of an irrigation policy and strategy which had been worked out in fifteen years of promoting irrigation development in the west. During those fifteen years the Canadian government had been convinced, despite considerable resistance, that irrigation was essential to the growth of the dry south.

The North West Irrigation Act, 1894 established the parameters within which irrigation would be developed. It presumed that the construction and management of irrigation works would be undertaken by private corporations, privately-capitalized and obtaining profits from the sales of irrigable land. In the optimistic climate of the time, the expectations for profit from irrigation encouraged both entrepreneurs and speculators to become involved in promoting and developing irrigation schemes. Of the three major systems begun in this period, the following thesis concerns itself with the promotion, construction, marketing and operation of the Bow River Irrigation Project (as it came to be known), a system financed by British capital between 1906 and 1950.

An examination of the Bow River Project reveals not only the inadequacies of the economic rationale under which it was developed, but also the insufficiently stringent control which marked its early promotion and construction. The project was the victim, initially, of a group of speculators, more interested in obtaining quick withdrawals from the capital pool made available to them than with the long-term profitability of the system. The project, as a result,

was saddled with a debt-load which forced the price of its land to rise to unrealistic levels. Its completion was also delayed so that it missed the opportunity to market its land in the prosperous pre-World War I years, rather than the economically depressed post-war years.

The failure of the project to provide sufficient income for its continued development and operation, not to mention providing no return on investment, forced it into several financial crises, chronic poverty, and a persistent dependence on government intervention. Until the 1930's, governments, both Dominion and Provincial, were reluctant to acknowledge a role in the financing of irrigation development. Only the economic and climatic disaster of the 1930's forced a change in thinking. A new economic rationale, by which costs were allocated accrued benefit, became the new method of evaluating the feasibility of irrigation financing.

The company operating the Bow River Project had demonstrated its inability to operate the irrigation system as a profitable venture and desired to be released from the financial burdens which beset it. The federal government became increasingly interested in the existing system as part of a major development encompassing land beyond the company's boundaries. With government involvement in irrigation becoming a fixed policy, the system was purchased from the British company, ending an era in irrigation development in southern Alberta.

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ABBREVIATIONS

GAI	Glenbow-Alberta Institute Archives, Calgary
PAA	Provincial Archives of Alberta, Edmonton
PAC	Public Archives of Canada, Ottawa
SAB	Saskatchewan Archives Board, Regina
UAA	University of Alberta Archives, Edmonton

Introduction The Beginning of Canadian Irrigation Development, 1879-1906

The development of irrigation projects in the southwestern portion of the Canadian plains was a response to the special requirements of that country to support settlement. Its promotion by individuals, corporations and governments, beginning in the 1880's, constituted a major variation in the settlement programs established soon after the transfer of the North West Territories in 1870. For the Dominion Government, particularly, the acceptance of irrigation as a strategy of settlement was difficult and not achieved without considerable pressure from the residents, who recognized both its value and necessity.

Until the Canadian Pacific Railway altered the route of its main line in 1881, irrigation was almost ignored in plans for the development of the North West. Although the first irrigation ditch was dug as early as 1879, by John Glen near Calgary, the southern plains were universally recognized as having a secondary place in the settlement of the west. Ever since the attention of Canada had been directed to Rupert's Land in the 1850's, all who thought of its future agreed that the core of settlement would occur along the "Fertile Belt", the narrow band of country stretching along the Red and North Saskatchewan Rivers. These investigators, both government employees and private individuals, were equally unanimous in their rejection of the plains region as a place of settlement.[1]

Government policies had, therefore, quite reasonably focussed on establishing an administration within the projected settlement area,

the Fertile Belt. Plans for creating a police force, beginning in 1870, were predicated on having the force concentrated in the settlement zone, with only nominal presence near the border, to forestall illegal trading.[2] Instructions for setting up a headquarters confirmed the recommendations, calling for its location at Swan River.

The selection of the capital also fit the pattern. Battleford was a central location, on the [illegible]-established communications route, the Carlton Trail, and on the projected route of the Canadian Pacific Railway. Despite innumerable alternative routes proposed for the mountain section of the railroad, the prairie stretch was quickly set, and the construction of the Dominion Telegraph along the same surveyed line lent strength to the decision. The Government's land survey also took account of the expected core of settlement. The Special Meridian Survey from 1876-1879 was conducted to establish the main lines of the survey within the Fertile Belt in order to facilitate the sectional survey of that country so that the land would be available for orderly settlement as soon as possible.[3] With the attention of everyone concentrated on the Fertile Belt, no one wasted thoughts on irrigation except those, like Glen, who settled on the fringes of the "Palliser Triangle".

The decision of the Canadian Pacific Railway Company to change the route engendered a major dislocation of Government activities and policies. The C.P.R., though naturally concerned that their railway run through country capable of supporting a population and generating traffic, was impelled by a number of other considerations in making its momentous decision.[4] The determination of the Company to complete

construction in half the required time made the shorter prairie route to the mountains attractive, despite the risk that no good mountain route would be located so far south. The prairie route also offered other attractions. Because no one had thought to locate the railway in the south, the Company would pass through virtually unoccupied territory, leaving the selection of townsites and farm land unhindered by the presence of either settlers or private speculators. Further, the land was devoid of a number of critical resources, such as building materials (other than sod, of course) and fuel (other than buffalo chips). James J. Hill commented, in supporting the change of route, that

> If we build this road across the prairie, we will carry every pound of supplies that the settlers want and we will carry every pound of produce that the settlers wish to sell, so that we will have freight both ways.[5]

Finally, the change removed much of the risk of competition from railroads being built or planned just south of the border.

For the Company, then, John Macoun's confidence that the prairie land was fertile provided the necessary assurance that its decision, made with other motives, was reasonable. The Government's consent, however, was largely based on Macoun's estimate of the land's quality, a belief that settlement in the Fertile Belt would be only temporarily delayed,[6] and a desire to expedite western settlement in order to stimulate the eastern economy.[7] Government offices and policies were transferred south with little attempt to reexamine the latter in light of changed circumstances.

Throughout the early years of the 1880's, conditions on the plains appeared to justify Macoun's, and the Government's, confidence. Reports

of the Deputy Minister of the Interior, Alexander MacKinnon Burgess, recorded a steady, if slow, increase in population accompanied by equally steady improvements in crop production. Generally, Burgess claimed, the weather was proving eminently satisfactory for the growth of a prosperous agricultural economy.[8]

Not all government officials shared his confident view of the west's potential. William Pearce, particularly, recognized that the west could not be viewed as a unit, to be exploited by a single settlement strategy. During the course of a thirty-year career in the Department of the Interior, Pearce became one of the most influential members of the Department's "outside service" in the West. Due to a brief flurry of silver mining interest in the Rockies (later discovered to have been based on a hoax), Pearce had been appointed to a position, Superintendent of Mines, for which there was virtually no work. He had used his anomalous status to become the Department's chief troubleshooter and advisor on development policy. He earned the sobriquet, "Czar of the West", as much for his outspokenness, bluntness and tyrannical disposition as for the very real authority which his vigour and perceptive observations provided him.[9] Pearce was headquartered in Calgary and became interested in the development of the ranching industry in southern Alberta. In that portion of the North West, roughly encompassed by the Cypress Hills, the Red Deer River and the Rocky Mountains, the observations of John Palliser most strikingly applied, particularly as the relatively wet decade of the 1870s was replaced by the dry 1880s and 1890s.

Pearce saw in irrigation a useful aid to the ranching industry and first referred to it in his report to the Deputy Minister in 1885. It was Pearce's view that the southwest could not be best exploited by the introduction of the 160 acre single-family farm, as envisioned by the Government in its drafting of the Dominion Lands Act. In order to exploit the natural qualities of the grasslands, cattle grazing should be encouraged and policies developed both to control and to promote the ranching industry. Of vital importance was regulation of the use of water. Settlers were already filing homesteads in the area, almost exclusively along the major streams, which they correctly recognized to be the only land suitable for farming. But such a development would eventually deny ranchers easy access to water, rendering 97% of the land relatively valueless.

Pearce proposed that all land which was valuable primarily for its access to water, production of hay, or provision of shelter, should be reserved from settlement so that it could be exploited for the benefit of the ranching industry. Even with such reservations, however, the potential of the ranching industry could only be fulfilled if winter feed supplies could be secured. Pearce recommended the use of irrigation to produce hay as winter feed for cattle.[10]

Pearce's proposals suggested radically different settlement patterns than those contemplated by the Government. Homestead settlement would be discouraged except as it complemented the ranching industry. Even then it would be subject to more rigid controls through the regulation of water supplies. His recommendations were not well received in Ottawa. Commenting on Pearce's report in his own report to

the Minister in 1885, Burgess stated that the idea was premature, since it would be many years before such marginal land would need to be taken up.[11] Burgess' rejection of Pearce's proposal was not inspired by a lack of interest in the ranching industry; indeed, the government was vigorous in providing for the growth of ranching.[12] Rather, Burgess ignored the context in which Pearce had proposed irrigation and dismissed it on the grounds that it was superfluous to the government's homestead programme, an application which Pearce was not yet advocating.

The initial disregard for Pearce's irrigation proposal did not prevent him from pursuing his interest. With the exception of 1890, Pearce reported on the need for irrigation in each of his annual reports to Burgess, as well as writing numerous letters and special reports on the topic. Every new detail was passed on to his superiors to lend strength to his argument.

In 1887, when Charles Ora Card's Mormon colony was established at Lee's Creek, south of Lethbridge, Pearce supported them, recognizing the value of their experience and example in irrigation agriculture.[13] Card and his co-religionists were thoroughly experienced irrigators and had quickly recognized the irrigability of the country around Lee's Creek. They promptly began small-scale irrigation along bottom-land and attempted to acquire a large tract of land from the Dominion Government, in a solid block, in order to construct a more extensive system. But the government, worried by the possible social problems arising from a large migration of Mormons into the south, refused to allow the consolidation.[14] Pearce, in his turn, dismissed the government's

concerns about the Mormon lifestyle, stressing the tremendous irrigation expertise they could bring to the country.

In 1889 Pearce delivered a paper before the Dominion Land Surveyors' Association, in which he questioned the value of the homestead system for exploiting semi-arid land and revealed the development of his own ideas concerning irrigation. Pearce no longer proposed irrigation as a mere appendage to ranching. Instead, he proposed a "hamlet system", which called for the intensive use of relatively small parcels of land, grouped to make most efficient use of the irrigation network and involving the raising of cattle, both beef and dairy, on the grasslands above the irrigated area.[15] He also attacked Burgess' argument that irrigation was unnecessary so long as good dry land was plentiful. Pearce pointed out that irrigated land would attract a breed of settler, who might otherwise not consider moving to Canada, onto land which might otherwise remain unoccupied.[16] He cited the Mormons as an excellent example of his point.

Pearce capped his arguments in his 1891 report when he revealed the plans of the Great Northern Railway to divert water from the St. Mary's River to supply irrigable land along the Milk River in Montana. The project, if undertaken, would deny to Canada a valuable supply of water in the St. Mary's, which could be more cheaply exploited in Canada than the United States.[17]

Pearce was not alone in pressuring the Government to recognize the need for irrigation. Within the Department of the Interior, Pearce had steady, if quiet, support from J.S. Dennis, then Chief Inspector of Surveys. He also benefitted from the determination of the Mormons to

practice irrigation. When the Government refused to grant them homesteads in a block, the Mormons turned to the Northwest Coal and Navigation Co. as a source of land. To permit the development of the irrigation scheme that they were contemplating, they required major incentives from the Government, including the consolidation of the Galt land grant into a single block. To the internal pressure was added, therefore, the considerable political influence of the Galts.

Nor was the Territorial Government disinterested in the issue. On 21 October, 1889 a Special Committee of the Legislative Assembly was set up to consider the matter of irrigation. In its report the Committee referred specifically to Pearce's address and recommended it to the attention of the Dominion Government.[18]

Nicholas Flood Davin, M.P. for Assiniboia, laid the Assembly's request before the House of Commons on 14 April, 1890, presenting the motion:

> That it is expedient that the Government should direct earnest attention to the establishment of irrigation in the Territories.[19]

In subsequent debate, however, Davin limited himself to seeking government assistance in locating domestic wells, leaving the larger question of irrigation untouched. The debate on his motion was brief; only four other members spoke to it, none representing the area most in need of it and none in favour of pursuing the matter. The motion was defeated.[20]

The Territorial Assembly did not drop the matter. On 18 December, 1891 another Special Committee was set up. It was chaired by Charles A. Magrath, land agent for the Galt enterprises, and reported in January, 1892. The report quoted extensively from American statements on the

value of irrigation, and cited, as had Pearce, the possible diversion of St. Mary's River water into U.S. irrigation schemes. In recognition of the real benefits of irrigation and of the threat inherent in the U.S. proposal to Canadian projects based on the St. Mary's, (as the Galt/ Mormon scheme was) the report called for the Dominion Government to conduct an immediate investigation of irrigation capacity in the southwest and to treat bona fide projects "as liberally . . . as railways are and have been."[21]

The growing pressure for an irrigation policy was reflected in and assisted by the press of southern Alberta. Led by the Lethbridge News, a vigorous proponent of the benefits of irrigation,[22] the newspapers began to express their support for irrigation through articles and editorials. Both the News and the Medicine Hat Times, for example, published Pearce's address to the Dominion Land Survey Association in full on their front pages.[23] Both also called for an irrigation convention to discuss the issue.[24] The Macleod Gazette published numerous reports on irrigation proposals being made in the district and recommended them to consideration of the authorities.[25] Magrath's report on irrigation was heartily approved by the Calgary Herald.[26] Such reporting, particularly in the News and Gazette, kept irrigation continuously in the public eye.

The response of the Dominion Government to the increasing pressure for an irrigation policy was initially one of resistance. The Government's refusal to consider the matter was based on two points. The first had been stated by Burgess in his first response to Pearce's reports: that the irrigable dry land in the west was of marginal value

so long as good land remained to be settled. The point was reiterated in the House before the House Committee on Agriculture and Colonization in 1891, during testimony by Professor James Gordon Mowat.[27]

In responding to Davin's motion, Robert Watson, M.P. for Marquette, voiced the more serious concern of the Government: that discussion of irrigation might lead potential immigrants to believe that only irrigation could render the country arable.[28] The potential of the irrigation issue to produce bad publicity for the west seriously worried senior officials of the Department of the Interior, particularly A.M. Burgess. Burgess took no official notice of irrigation in his reports to the Minister between 1887 and 1893, despite Pearce's persistence. In 1891, he refused Pearce permission to deliver a second paper to the Dominion Land Surveyors Association on the topic. He further instructed Pearce to refrain from publicly promoting irrigation.[29]

The crescendo of pressure from the west forced a change in the Government's position by 1892. It is likely that the news of American plans for the St. Mary's had considerable influence in the about-face. Only an early development of irrigation could establish Canada's claim to the water should a dispute arise.[30] But it was also only after 1892 that irrigation ceased to be a theoretical possibility and attained the status of a coming reality. Although a number of small irrigation works had been constructed since John Glen's first attempt, by 1893 major development was becoming likely. Three companies, the Macleod Irrigation Company, the Calgary Irrigation Company and the Alberta Irrigation Company, applied for incorporation. Of these, the latter

two were of particular note. The Calgary Irrigation Company was started by William Pearce, mostly to prove the value of irrigation and to sidestep the muzzle which Burgess was trying to apply. The Alberta Irrigation Company was the agency whereby the Galts and the Mormons sought to implement their irrigation plans. In order to establish standards for the operation of such companies and to prevent uncontrolled exploitation of the available water, legislation became imperative.

Once converted, the Government moved with dispatch. Pearce was assigned the task of providing a complete report on irrigation.[31] In 1893, he travelled east to assist in the preparation of a draft bill.[32] J.S. Dennis was sent to the western United States to examine irrigation law, surveys and engineering in operation.[33] On 29 May, 1893, T.M. Daly, Minister of the Interior since the previous October, introduced the "Dominion Irrigation Act" to the House of Commons. It was presented for information, with no intention of pursuing its passage in that session.[34] On 30 March, the bill was withdrawn but was submitted to the critical comment of numerous experts and interested people. Pearce personally distributed two hundred copies to knowledgable westerners, with which he enclosed a circular letter explaining many of the provisions.[35] Pearce thought that the most important provision, and the one liable to produce the most opposition, was the suppression of riparian rights. He took pains to justify the necessity for government control over the allocation of water, which would always be in shorter supply than irrigable land.

To ensure that the Government's interest in irrigation did not die, the Calgary Agricultural Society organized an Irrigation Convention for 8-9 March, 1894, at which time the Southwest Irrigation League was formed and a delegation was appointed to travel to Ottawa. The Canadian Pacific Railway provided the delegation with free transportation to the capital.

The second draft of the irrigation bill, now titled "The North-West Irrigation Act", was submitted to the House on 5 June, 1894.[36] Debate on the bill was remarkably desultory. The only significant alteration was the exclusion of artesian water from government control.[37] The bill passed into law on 23 July, 1894. It provided for the reservation of land in Irrigation Districts, the control of irrigation companies, the allocation of water on a priority basis, and the institution of a complete survey of irrigable land and available water. It also, in effect, stated the limits of the government's participation in irrigation development. The government would undertake the water resources surveys and regulate development, but it was understood that financing would be entirely private.

The passage of the North West Irrigation Act, which marked the culmination of a decade of pressure and promotion, did not, however, produce an immediate upsurge in irrigation activity. Economic forces retarded the beginning of large-scale irrigation for the remainder of the 1890's. A general economic depression prevailed in Europe and the Americas from the late 1880's until well into the 1890's. Under such conditions it was almost impossible to obtain capital for irrigation ventures.

Of the three corporate applications which helped to precipitate the Government's action, only Pearce's Calgary Irrigation Company began work immediately. The fate of Pearce's project provided ample evidence of the difficulties which faced irrigation promoters. Pearce's scheme was relatively modest, calling for the construction of irrigation works to supply 46,000 acres of land with water from the Elbow River (see Map 1). The company was initially capitalized at $100,000.00 which Pearce expected to be taken up by local citizens and by companies with local interests, such as the Calgary and Edmonton Railway. The venture did not, however, attract investors and the company was eventually financed by its principal promoters; Pearce and his wife; P. Turner Bone, the company's manager and engineer; and Louisa M. Meyer, the company's secretary.[38]

Despite the opposition of a rival claimant to the Elbow River's water supply (the Springbank Irrigation District) and the government's disquiet over Pearce's involvement, the scheme was in operation by 1895. In 1896, Pearce resigned as President in favour of Peter Prince, manager of the Eau Claire and Bow River Lumber Company. A.E. Cross, president of the Calgary Brewing and Malting Company, also became involved.[39] However, efforts to obtain financing in Scotland failed[40] and Pearce was never able to divest himself completely of his interest because he could find no buyers for his shares.

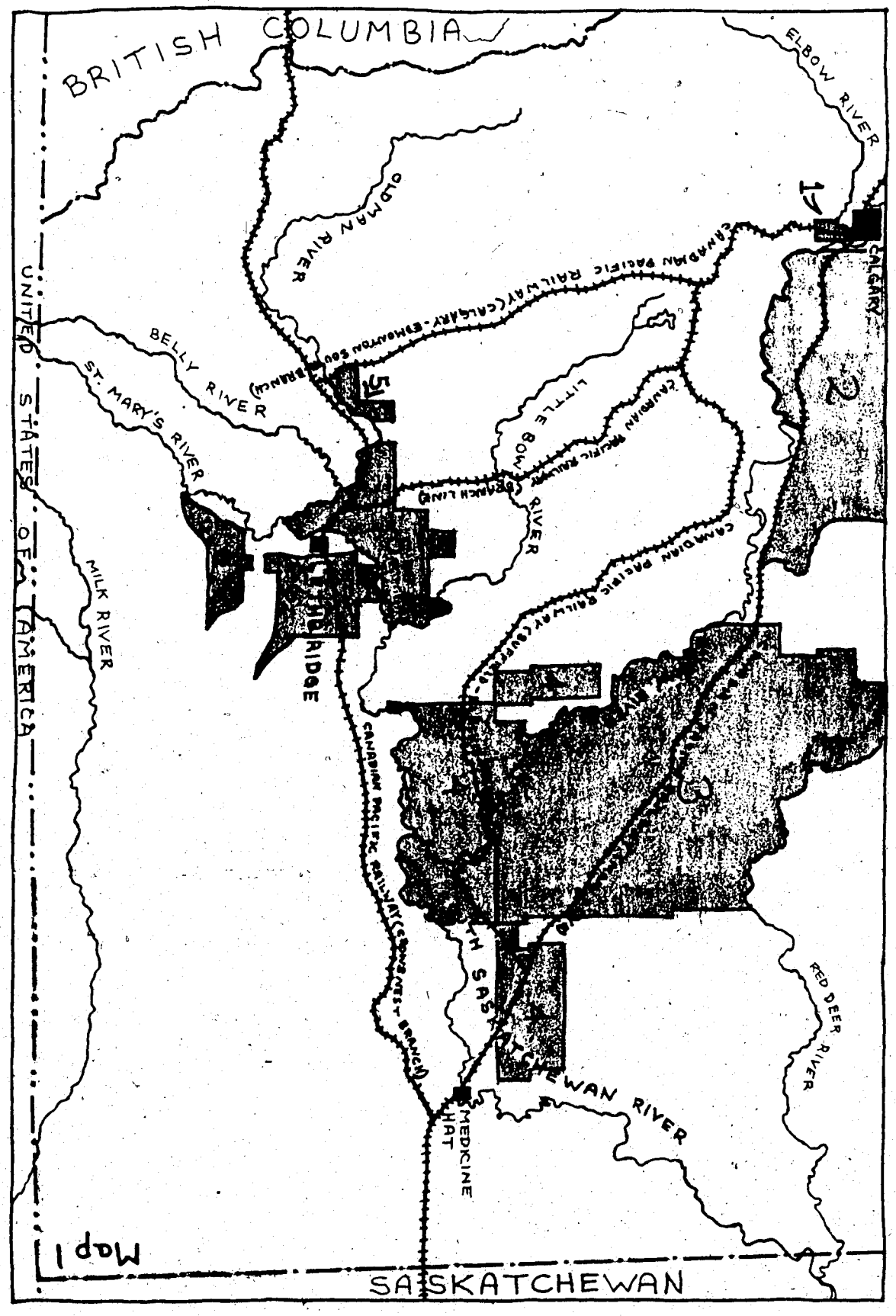
The company remained seriously under-capitalized and faced uncertain revenues. Its irrigated land became available just as a wet spell arrived. Farmers could see no reason to buy higher-priced irrigable land or pay for water supplies during wet years. Efforts to

MAP 1

The irrigation country, showing

major projects, 1893-1949

1. Calgary Irrigation Company
2. Canadian Pacific Railway (Western Irrigation District)
3. Canadian Pacific Railway (Eastern Irrigation District)
4. Canada Land and Irrigation Company
5. Lethbridge Northern Irrigation District
6. Alberta Railway and Irrigation Company


BRITISH COLUMBIA
ELBOW RIVER
OLDMAN RIVER
CANADIAN PACIFIC RAILWAY (CALGARY-EDMONTON SOUTH BRANCH)
CALGARY
BELLY RIVER
ST. MARY'S RIVER
LITTLE BOW RIVER
CANADIAN PACIFIC RAILWAY (BRANCH LINE)
UNITED STATES OF AMERICA
MILK RIVER
LETHBRIDGE
CANADIAN PACIFIC RAILWAY (CROWSNEST BRANCH)
SOUTH SASKATCHEWAN RIVER
RED DEER RIVER
MEDICINE HAT
SASKATCHEWAN
Map 1

diversify the company with a dairy operation were unsuccessful. Floods damaged the company's works in 1897 and the company was unable to effect proper repairs. By 1906 the company was moribund and it was wound up the next year.

The impossibility of obtaining capital also stalled the Galt enterprise. The general economic malaise, accompanied by specific problems in the Galt's coal operations, pushed Elliott Galt to promote irrigation in order to bring the earning power of his companies' land to bear on his economic difficulties.[41] But his attempts to obtain financial support, first from his London directors, then for the independently financed Alberta Irrigation Company, failed.[42]

Only after a combination of events greatly altered conditions after 1896 did the prospects for irrigation improve. A general restoration of prosperity and a shift toward settlement in Canada, a result of the closing of the American frontier, came just as the Canadian West came under the aggressive control of Clifford Sifton. The new regime in the Department of the Interior actively supported endeavours which the previous administration had, at best, only permitted. The Galt enterprise, for example, found in the new economic and political climate the resources and encouragement it needed to begin development.[43] Renamed the Canadian North-west Irrigation Co. Ltd., Elliott Galt completed the first major irrigation project in the Territories between 1899 and 1901.

A new prospect had also entered the field, the Canadian Pacific Railway. By 1894, a decade after the completion of the main line, the C.P.R. had not yet selected its full land grant entitlement. Impelled

by its right to select land "fairly fit for settlement", the Railway had forced the government to open areas far beyond the original "Railway Belt" for Company selection.[44] The Company still had, however, a large outstanding claim which was becoming increasingly difficult to fill in the face of competitive claims by other land grant railways.

Beginning in 1894, William Pearce began to encourage the Railway to consider an alternative. He suggested that the company forego its right to immediately productive land and accept a single block of country within the irrigable area of southern Alberta.[45] Pearce pressed his idea vigorously but the Company was reluctant to pursue the matter. It was not prepared to surrender other avenues for fulfilling its land claim and it continued to pressure the Dominion government to open up more areas for selection, the last being the second Northern Reserve in 1896.[46] It was also constrained, like the Galt enterprise, by financial stringencies and it wished to delay any commitment until it had seen results from Galt's project.[47]

By 1901, however, both the Government and the Company had a stake in clearing up the latter's outstanding claim, as the flood of immigration began to fill up the west. Negotiations involving the transfer of almost 3,000,000 acres of land between Medicine Hat and Calgary took place between 1901 and 22 August, 1903, when an Order-in-Council authorized the transfer of land (see Map 1).[48]

By the turn of the century, therefore, a pattern of irrigation development had been established. The Dominion government had taken steps to bring irrigation activity under legislative control, albeit only after determined pressure from influential government officials,

entrepreneurs, settlers, newspapers and western politicians. Implementation of the irrigation policy was left to private corporations, which undertook to irrigate large tracts of land on the expectation of profiting from land sales. In 1906, three major irrigation schemes were active; the Canadian Pacific Irrigation Company, the Alberta Railway and Irrigation Company (as the Galt project was renamed), and the Southern Alberta Land Company. It is about the project developed by the last of these that the following thesis will deal.

Footnotes

1. Of major significance, of course, was the judgement of the Palliser Expedition, but its opinion was matched by the Report of the Dawson and Hind Expedition [Henry Youle Hind, Narrative of the Canadian Red River Expedition . . ., 2 vols. in 1. (Edmonton: Hurtig, 1971), 2:234] as well as those of individuals such as the Earl of Southesk [James Carnegie, Earl of Southesk, Saskatchewan and the Rocky Mountains. (Edmonton: Hurtig, 1969) p. 332] and Dr. W.B. Cheadle [William Fitzwilliam, Viscount Milton, and Dr. W.B. Cheadle, The Northwest Passage by Land. (Toronto: Coles, 1970), p. 41.]

2. See Sir William Francis Butler, The Great Lone Land. (Edmonton: Hurtig, 1968), p. 385, and Col. Patrick Robertson-Ross in Canada, Parliament, Sessional Papers, "Report on the State of the Militia in the Dominion of Canada", VI, Vol. 5, No. 9, 1873, pp. cvii-cxxvi.

3. Don Thomson, Men and Meridians, Vol. 2: 1867 to 1917. (Ottawa: Queen's Printer, 1972), p. 38.

4. Pierre Berton, The Last Spike: The Great Railway, 1881-1885. (Toronto: McClelland and Stewart, 1971), pp. 11-23.

5. Quoted in John Macoun, Autobiography of John Macoun, M.A., Canadian Explorer and Naturalist . . . 1831-1920. (Ottawa: The Field Naturalists' Club, 1922), p. 185.

6. E. Alyn Mitchner, "The Development of Western Waters, 1885-1930", post-doctoral study, University of Alberta, 1973, p. 23. GAI

7. A.A. den Otter, "The Galts and Irrigation in Alberta: An examination of the entreprenurial role in frontier development", paper presented at the C.H.A. Annual Meeting, Edmonton, June, 1975, p. 5.

8. Canada, Dept. of the Interior, Annual Report for 1884, Ottawa: Queen's Printer, 1885, p. xxi.

9. For a study of Pearce's role in western development, see E. Alyn Mitchner, "William Pearce and federal government activity in western Canada, 1882-1904", (Ph.D. dissertation, University of Alberta, 1971).

10. Interior, Report for 1884, "Report of the Superintendent of Mines", pp. 19-20.

11. Ibid., p. xxiv.

12. See David Breen, "The Canadian West and the Ranching Frontier, 1875-1922". (Ph.D. dissertation, University of Alberta, 1972), p. 188 et seq. The government did, in fact, accept many of Pearce's other recommendations concerning the control of resources for ranching, e.g., stock water reserves.

13. Interior, Report for 1887, "Report of the Superintendent of Mines", p. 13.

14. A. James Hudson, Charles Ora Card, Pioneer and Colonizer. (Cardston: by the author, 1963), pp. 123-125.

15. Lethbridge News, 13 November, 1889, p. 1.

16. William Pearce, undelivered paper prepared for Dominion Land Surveyors Association, 10 January, 1891. William Pearce Papers, ff. 9/2/7/2-6. UAA.

17. Interior, Report for 1891, "Report of the Superintendent of Mines", p. 11.

18. Canada, North West Territories, "Report of Special Committee of the Legislative Assembly . . . appointed to consider the question of irrigation in the Territories", 19 November, 1889. SAB.

19. Canada. Parliament, Official Report of the Debates of the House of Commons, Vol. xxx, 1890, p. 3292.

20. Ibid., p. 3309.

21. Canada. North West Territories, "A Report made to the Legislative Assembly . . . by a Special Committee appointed to investigate the subject of irrigation", 12 January, 1892. SAB.

22. A.A. den Otter, "Irrigation and the Lethbridge News", Alberta Historical Review 18 (Autumn, 1970):17-25.

23. Lethbridge News, 13 November, 1889; Medicine Hat Times, 12 December, 1889.

24. Lethbridge News, 20 November, 1889; Medicine Hat Times, 8 December, 1889.

25. See, for example, Macleod Gazette, 22 January and 16 April, 1891.

26. Calgary Herald, 20 January, 1892.

27. C.S. Burchill, "The origins of Canadian irrigation law", Canadian Historical Review 29 (December, 1948):358.

28. Debates, 1890, p. 3305.

29. A.M. Burgess to William Pearce, 21 January, 1891, Pearce, ff. 9/2/6/4-1.

30. N.F. Dreisziger, "The Canadian-American irrigation frontier revisited: The international origins of irrigation in southern Alberta, 1885-1909". CHA Historical Papers (1975):223-4.

31. Interior, Report for 1893, p. xxxi.

32. Pearce, ff. 9/2/7/2-6.

33. Interior, Report for 1894, p. xxviii.

34. Debates, 1893, p. 3344.

35. Pearce, ff. 9/2/7/1-2 and 9/2/7/2-6.

36. Canada. Statutes. The North-West Irrigation Act, 1894, 57-58 Vic., Ch. 30.

37. Debates, 1894, p. 4949.

38. Installment lists, Calgary Irrigation Co. Ltd., 1893-1894, Pearce, ff. 9/2/7/3-4.

39. William Pearce to T. Mayne-Daly, Minister of the Interior, 6 March, 1896, Pearce, ff. 9/2/7/3-8.

40. P. Turner Bone to William Pearce, 1 and 30 December, 1897, Pearce, ff. 9/2/7/3-7.

41. A.A. den Otter, Civilizing the West: The Galts and the development of western Canada. (Edmonton: University of Alberta Press, 1982), p. 205.

42. den Otter, Civilizing the West, pp. 207-208.

43. Ibid., pp. 221-222.

44. Chester Martin, "Dominion Lands" Policy. (Toronto: McClelland and Stewart, 1973), p. 49.

45. Correspondence re Canadian Pacific Railway, irrigation at Crowfoot, [illegible]4-1902, Pearce, ff. 9/2/7/3-11.

46. Martin, op. cit.

47. William C. Van Horne to William Pearce, 26 December, 1897, Pearce, ff. 9/2/7/3-11.

48. James B. Hedges, Building the Canadian West: the land and colonization policies of the Canadian Pacific Railway. (New York: Macmillan, 1939), pp. 55-58.

Chapter 1 Promoting the Bow River Project, 1901-1906

The financing of irrigation by private companies was carried out in the expectation that investment in irrigation works would be recouped by the enhancement of land prices within the project. No company expected to pay for the cost of construction through charges for the delivery of water. At best, those charges were expected to cover only the costs of operating the system. In any event, charges for delivering water were subject to regulation under the North West Irrigation Act.[1] Land prices were not.

At the turn of the century, ordinary dry land could still be obtained under the Dominion Lands Act for a filing fee and three years of active occupation. After 1908, it was also possible to purchase Crown land, as a pre-emption or purchased homestead, for $3.00 per acre.[2] The Canadian Pacific Railway Company was selling its land at an average price of $3.10 per acre in 1900.[3] The Hudson's Bay Company's average price at the same time was $5.04.[4] Land prices for both companies rose steadily in subsequent years.

Expectations of even higher land prices spurred interest in irrigation. During his campaign to lead the C.P.R. to water, William Pearce projected the cost of his irrigation schemes at $2.00 to $4.00 per acre.[5] The initial project opened by the Canadian North-west Irrigation Company, south of Lethbridge (see Map 1), probably cost approximately $3.00 per acre to construct between 1898 and 1900.[6] Neither of these companies had any real cost for their land since it was acquired through government land grants. Yet, the initial price

set for land in the Alberta Railway and Irrigation Company project was $8.00-$10.00 per acre in 1900. By 1906 the company was asking $18.00 per acre.[7] The Alberta Railway and Irrigation Company set the precedent for expectations in later projects. When, in 1906, the Canadian Pacific Railway was prepared to market its first irrigated land in the Western Irrigation District (see Map 1), it received an offer from a colonization company to guarantee $11.00 per acre for irrigable land. Despite the fact that the colonization company would bear all costs attendent on selling the land, the Railway accepted the offer somewhat hesitantly, feeling that too much profit was being relinquished to the colonizers.[8] The colonization company proceeded to offer the irrigable land at $25.00 per acre. Even non-irrigable land within the project was being offered at a higher price ($15.00 per acre) than equivalent land outside the Irrigation Block, because of its proximity to watered land.[9]

The "Midas Touch" which irrigation appeared to have on land prices in these projects suggested to many people that there was profit to be made just from holding an interest in irrigable land. The prevailing economic rationale encouraged speculators as much as it did entrepreneurs. It was in this atmosphere of booming land prices that the Bow River irrigation project had its beginnings.

In 1901 and 1902, the Dominion Government granted grazing leases to James Duncan McGregor of Brandon, Manitoba and to Arthur Hitchcock of Moose Jaw, Assiniboia. They acquired contiguous tracts of land at the "Grand Forks" of the Bow and Oldman Rivers in southern Alberta (see Map 2). McGregor obtained 45,900 acres and Hitchcock, 44,605 acres with 21 year closed leases, which excluded the land under lease from

MAP 2

Grazing leases at the Grand Forks;

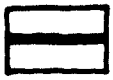
including the C.P.R. Irrigation Block, 1901-1906.

Arthur Hitchcock lease no. 2175

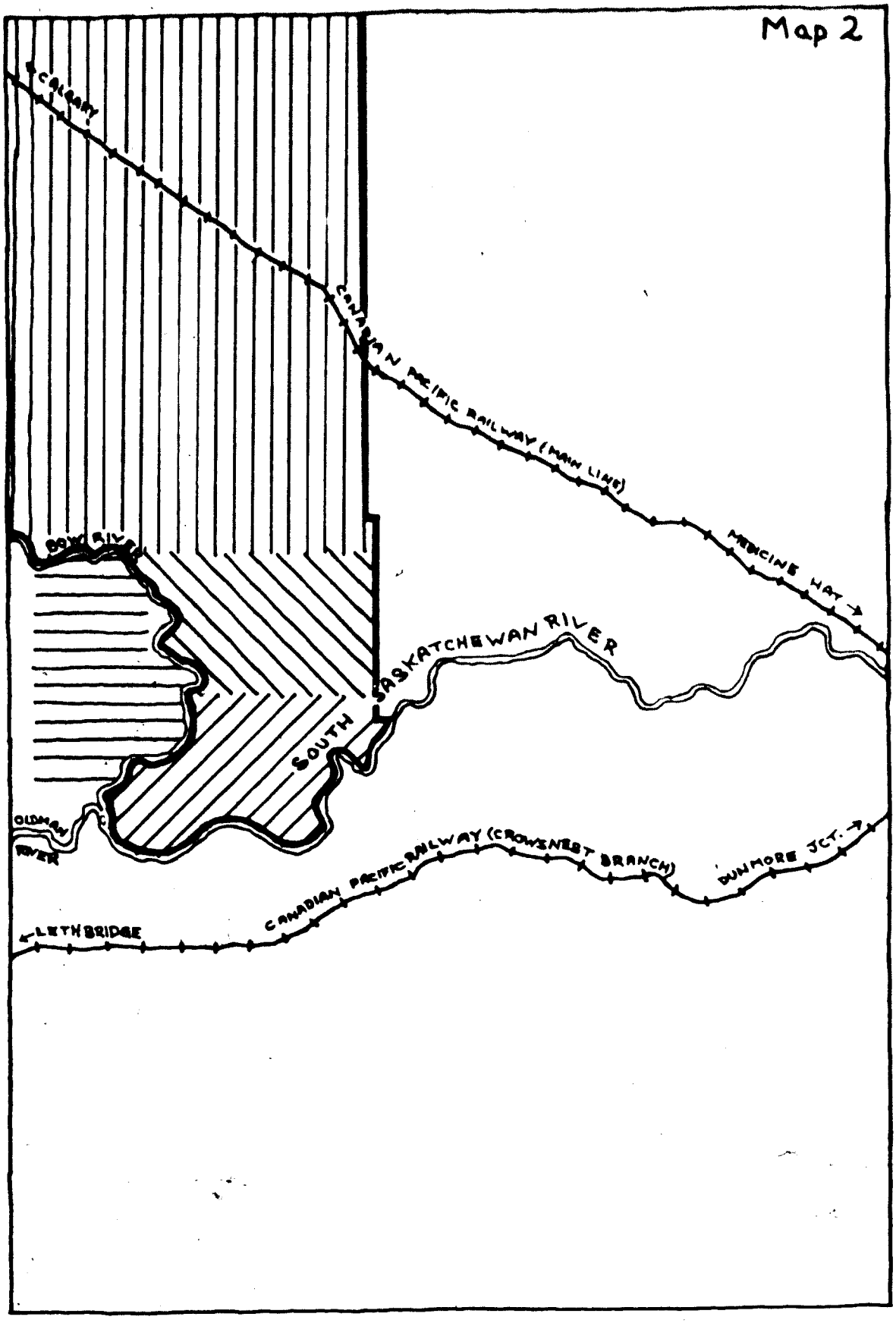
J.D. McGregor lease no. 2194

H.P. Brown lease no. 2422
(the Maunsell lease)

C.P.R. Irrigation Block at 1903.08.01



C.P.R. Irrigation Block to 1903.08.22


Map 2
CALGARY
CANADIAN PACIFIC RAILWAY (MAIN LINE)
MEDICINE HAT
SASKATCHEWAN RIVER
SOUTH
OLDMAN RIVER
CANADIAN PACIFIC RAILWAY (CROWSNEST BRANCH)
DUNMORE JCT.
LETHBRIDGE

withdrawal for homestead or purchase during the term of the lease. They were also granted the right to purchase a maximum of 1/10 of their leased tracts, plus 640 acres around ranch buildings, for $1.00 per acre.[10]

Applications for grazing leases were generally on the rise at the turn of the century, after a period in which ranching had increasingly operated from privately-held land and government-protected water reserves. The threatened loss of these reserves had re-activated an interest in leasehold ranching and, by 1902, large leases were being acquired with increasing frequency.[11]

The prime territory for this renewed leasing activity was the dry southern plains of the Territorial Districts of Assiniboia and Alberta. The recipients of leases were frequently political friends of the Liberal government in Ottawa.[12] The leaseholds of McGregor and Hitchcock were a part of the general trend. The land, tucked into the curve of the Bow and South Saskatchewan Rivers, was near the centre of the most sparsely settled area of the Territories. It was dry grassland, fit for extensive cattle grazing and, at that time, under little pressure from agricultural settlement.[13]

The two applicants also qualified as "friends of the government". James Duncan McGregor, in particular, had close connections with powerful interests in the Liberal Cabinet. Since the 1880s he had been a close political associate of Clifford Sifton, Minister of the Interior at the time the leases were granted. Born in Amherstburg, Ontario in 1860, he had arrived in Winnipeg in 1877 and soon became engaged in cattle raising at Portage la Prairie and, later, Brandon.[14]

He met Sifton during the Manitoba temperance campaign of 1886 and became an important political colleague thereafter.[15]

McGregor's vigorous support of Sifton's political career did not go unrewarded when Sifton attained a position of influence as Minister of the Interior. During the rush to organize an administration for the Yukon after the gold discovery, McGregor was included among the many Sifton friends who received government positions. He was appointed Inspector of Mines, despite a lack of any "ascertainable qualifications".[16] His activities in the Yukon seemed to be directed more toward personal business and political concerns than to the duties of his position. In letters to Sifton he discussed the acquisition of hydraulic dredging rights on the gold creeks, the need to remove political opponents from the Territory's government (including Charles Constantine), and the addition of more "Grits" in the administration.[17] Due, it would seem, to his complete incompetence in his position, McGregor was withdrawn from the Yukon after only a year, but was returned, as Liquor Commissioner, in 1900.

Arthur Hitchcock's connections with government are less clear. He was a lawyer and banker, part of the firm of Hitchcock and McCulloch of Moose Jaw. Although he had personal dealings with Sifton,[18] his importance seems to derive primarily from a close business connection with James H. Ross, also of Moose Jaw. Ross was a rancher, a prominent Territorial Liberal, and another close political associate of Clifford Sifton. He had been a member of the Territorial Assembly, and Commissioner of Public Works in the Territorial Cabinet. He also had obtained a political appointment to the Yukon, as Yukon Commissioner in

1901, but unlike McGregor, proved himself to be well worthy of the appointment.[19] Given Ross' later involvement in the company which was formed to exploit the grazing leases and Hitchcock's role in subsequent transactions, it is possible that Hitchcock was acting for Ross on this occasion.

The leases which were issued were, themselves, evidence of the political status of the recipients. Under normal regulations grazing leases could be revoked on two years' notice for the purpose of opening the land to settlement. McGregor and Hitchcock, as well as a few other applicants during the same period, were exempted from this uncertainty of tenure through the granting, by Order-in-Council, of irrevocable leases.[20]

Although the grazing leases were granted to McGregor and Hitchcock on 14 December, 1901 and 4 June, 1902 respectively, they were not immediately issued. McGregor sought the assistance of Sifton in completing his transaction during a visit to Ottawa in December, 1902.[21] But it was not until 24 December, 1903 that the Privy Council approved the issuance of the leases. According to the Report of the Minister of the Interior, not all the land in question had previously been available, though the lessees had already taken possession.[22]

They had, indeed. On 28 August, 1903 a certificate of incorporation was issued by the Territorial Government for the Grand Forks Cattle Company. The first meeting of the Company's principals was held in Medicine Hat on 12 September, 1903. They were James Duncan McGregor, who was appointed President, Treasurer and Manager, Donald A. Ross, appointed Secretary, and James H. Ross, appointed a Director.

The final Director was John C. Murray, a wholesale liquor merchant of Dawson, Yukon Territory.[23] Arthur Hitchcock did not appear either at the meeting or among the officers of the company.[24] The company had an initial capitalization of $150,000.00.[25]

The delay in completing the lease arrangements had been officially explained only briefly: that the land had not been previously available. The details, however, were more complex. The land covered by McGregor's and Hitchcock's leases was, until 22 August, 1903, part of the huge tract under consideration by the C.P.R. for its irrigation scheme.[26] The block of land between Medicine Hat and Calgary, north of the Bow River had been reserved from settlement until the Railway Company's selection was completed.[27] The approval of closed leases effectively sidestepped the reservation and gave to McGregor and Hitchcock interests in land which were potentially very valuable. Although the leases were not finalized, due to the Railway claim, neither were they revoked. The Government seemed willing to recognize the rights of the lessees to the land they had leased. The intent of the lessees was clear. If the land were to be included in the Irrigation Block, the C.P.R. would have had to seek the relinquishment of the existing leases, presumably by negotiating with the lessees, since the government was taking no steps to void their interest.

Instead, the C.P.R. declined to include the land in its tract. On 22 August, 1903 the bounds of the Irrigation Block were approved by Privy Council. The south boundary of the Block coincided with the north boundary of Arthur Hitchcock's lease.[28] The exclusion cannot have been due to a removal of excess land from the tract, because the Railway

had, in fact, to increase its initial selection by 400,000 acres in order to close out its land grant claims completely.[29]

The incorporation of the Grand Forks Cattle Company, only after the C.P.R. selection had been made official, would appear to have been a move to make use of the leases once speculative possibilities had disappeared. Neither lessee had moved to take possession previously, presumably because of the uncertainty of their claims, but neither had a more secure claim after the creation of the Cattle Company than before. Only when the leases were finally authorized in December was all uncertainty removed and by then the Company was already in operation.

Whatever the motive for its creation, the principals did operate the Company as a legitimate ranching concern. By the time of its second shareholders' meeting, on 8 September, 1904, they could report an investment of over $150,000.00 in land, buildings, machinery, fencing, wages, and, of course, cattle and horses.[30] By 9 September, 1905 the leases were stocked with 4400 head of cattle, 935 horses, and 51 sheep.[31] Until 1905 the actual leases remained in the hands of McGregor and Hitchcock. Only on 9 May, 1905 were the two leases transferred to the Company. In the meantime both lessees had exercised their options to buy 1/10 of their leases, a total of 9,452.65 acres.[32]

The operation of the Cattle Company did not, however, fulfill the probable first intent of the principals. By 1906 a new scheme had been devised to exploit the speculative potential of the tract. Once again the promise of irrigation was at the core of the scheme.

Activity in this direction began when E.H. Cuthbertson applied to purchase a tract of land under provisions of the North West Irrigation

Act on 10 March, 1906.[33] The land lay north of the South Saskatchewan River to township 13 and east of the Bow River to range 7, just west of Medicine Hat, encompassing within its bounds the grazing leases of the Grand Forks Cattle Company (see Map 3). Shortly thereafter the government received another application from Guy Tracey Robins of London, England to develop an irrigation tract contiguous to Cuthbertson's but south of the South Saskatchewan.[34] In June of that year Cuthbertson merged his scheme with Robins' under the name, the Robins Irrigation Company.[35]

The combined project had rather different boundaries, particularly south of the river (see Map 3), but still included the Cattle Company land. On 26 June, 1906 an agreement was signed between the Minister of the Interior and the Robins Irrigation Company for the sale of 380,573 acres of land at $3.00 per acre, for the purpose of constructing an irrigation project costing $1,000,000.00, the cost of which could be applied to the purchase price to the extent of $2.00 per acre. It was signed for the Government by W.W. Cory, Deputy Minister of the Interior, and for the Company by A.C. Hitchcock, attorney.[36]

The appearance of Hitchcock's name on the agreement provides the link between the Robins Irrigation Company and the syndicate which controlled it. In fact, although Robins had applied for the land and the agreement had been signed in his name, he seemingly had no interest in the company that bore his name. The syndicate was made up of James Duncan McGregor, of the Grand Forks Cattle Company, Major G.S. St. Aubyn, of the Canadian Agency, Limited, and Arthur Hitchcock, by then Secretary of the Cattle Company.[37]

MAP 3

Applications to irrigate land, 1906

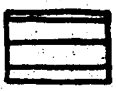
E.H. Cuthbertson 

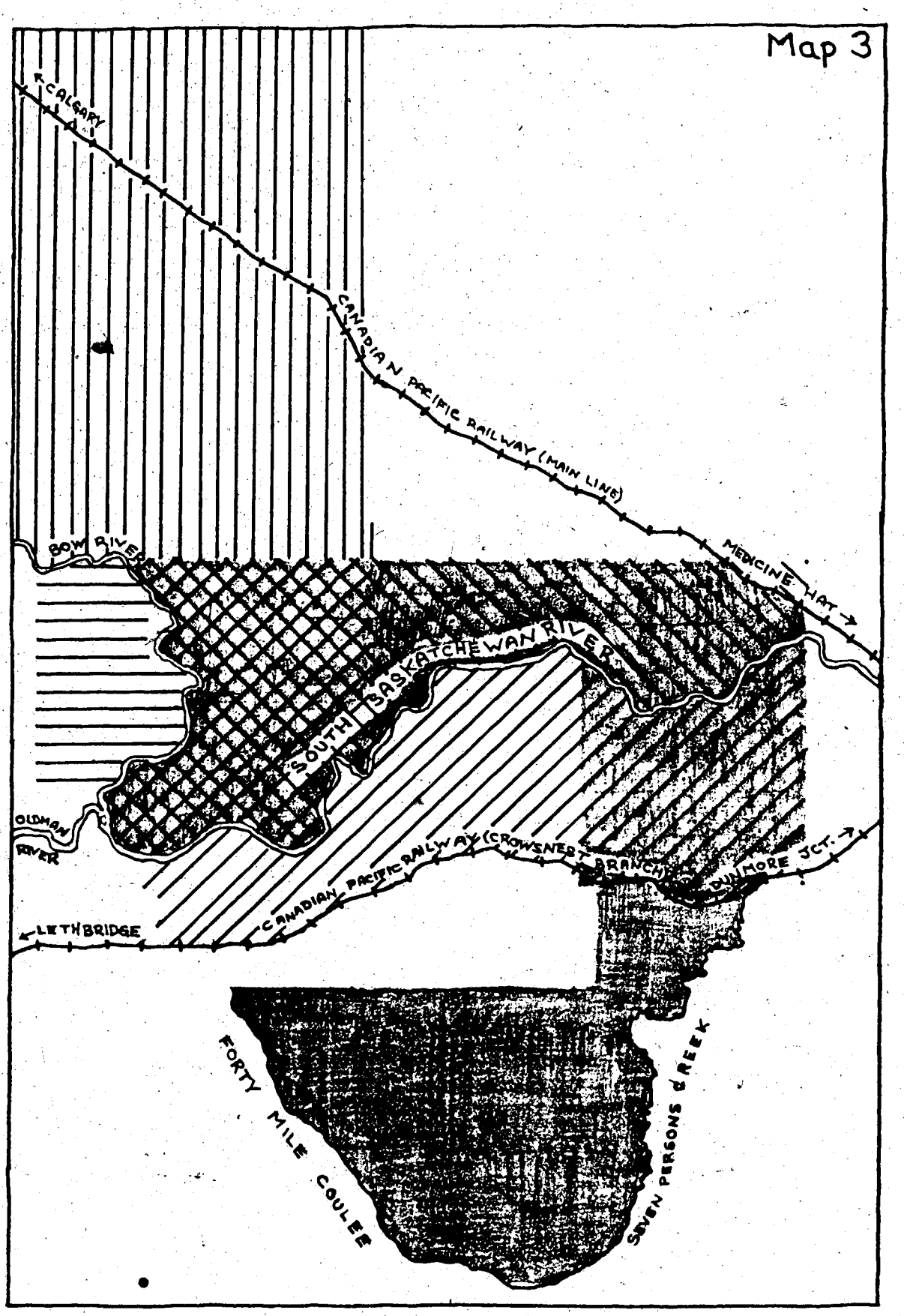
G.T. Robins 

Robins Irrigation Company 

Grand Forks Cattle Company 

C.P.R. Irrigation Block 

Maunsell lease 


Map 3
CALGARY
CANADIAN PACIFIC RAILWAY (MAIN LINE)
BOW RIVER
MEDICINE HAT
SOUTH SASKATCHEWAN RIVER
OLDMAN RIVER
CANADIAN PACIFIC RAILWAY (CROWSNEST BRANCH)
LETHBRIDGE
FORTY MILE COULEE
SEVEN PERSONS CREEK

Robins' role seems to have been designed to conceal the involvement of the principals, probably to hide the connection between the irrigation scheme and the grazing leases. Certainly, McGregor and company had sufficient cause to seek anonymity. The Conservative opposition had been sniping at the government throughout the session in 1906 over the Government's grazing lease policy, of which the principals of the Grand Forks Cattle Company had been major beneficiaries. On 30 May, 1906, Robert L. Borden, Leader of the Opposition, forced a full scale debate on the government's administration of Crown land, during which the opposition's grievances concerning the closed leases were thoroughly aired.[38] George E. Foster, M.P. for North Toronto, even noted the potential value of some of the closed leases, including the Grand Forks lease, as irrigable land.[39] It was hardly in the interest of the syndicate for its activities to come to the attention of the Official Opposition.

The presence of Major St. Aubyn in the syndicate set the stage for the speculative venture which followed. The Canadian Agency, Limited, of which St. Aubyn was a director, was a British investment firm, connected to the merchant bankers, Chaplin, Milne, Grenfell and Co. The banking firm was heir to the firm of Morton, Rose and Co., which had participated in the financing of the Canadian Pacific Railway in the 1880's.[40] On 6 September, 1906 B.J. Saunders, an irrigation consultant who had previously been a surveyor for the Department of the Interior, prepared a report on the Robins Irrigation Company's project for the Canadian Agency.[41] The explicit purpose of the report was to analyze its value as an investment opportunity for the Agency, but the

presence of an Agency official in the syndicate suggests that it was already committed to the venture. The report served to provide an "independent" valuation of the scheme for use in subsequent transactions.

The report was, of course, a glowing testimony to the quality of the scheme. Saunders divided the project into two tracts, according to the source of water. Tract "A", lying north of the South Saskatchewan River, contained 144,323 acres, of which Saunders foresaw 85,000 acres being irrigable from a thirty mile long main canal, drawing water upstream on the Bow River. J.G. McIntosh, engineer in charge of surveys, was reported to be investigating other intake sites farther upstream, which would bring 100,000 acres under the canal. Tract "B", south of the river, was to be irrigated from melt-water run-off held in Forty Mile Coulee. The southern tract was expected to irrigate 50,000-100,000 acres of its 236,250 acre extent.

To fulfill the obligations of the contract with the government, the company was required to spend at least $761,146.00 (in order to recover $2.00 per acre of the purchase price) and irrigate 95,143 acres (1/4 of the total). Saunders saw no difficulty in exceeding the obligation for irrigable acreage with a direct investment of much less than the required sum. For the anticipated cost of $1,000,000.00 he expected that 85,000 acres in Tract "A" and 50,000-75,000 acres in Tract "B" could be irrigated. Only $500,000.00 would be required to commence work, the remainder becoming available through the sale of land and the assets of the Cattle Company.

For the investment of $1,000,000.00 Saunders calculated a generous profit. Based largely on the asking prices for land in the C.P.R. and

Alberta Railway and Irrigation projects, he projected that irrigated land in both tracts would sell for $20.00-$25.00 per acre. Dry land would sell for $10.00-$15.00 per acre in Tract "A" and for $5.00-$10.00 per acre in Tract "B". The value of the property was enhanced by the proximity of the C.P.R. main line, which formed the northern boundary of the project, and the Crow's Nest Branch, which ran through the southern tract. Saunders also noted the availability, in quantity, of coal and natural gas in the vicinity. The balance sheet, therefore, appeared rosy (see Table 1).

A projected return of greater than twice the projected investment was attractive, indeed. Saunders also projected annual profits from the operation of the project. The water charge of $1.50 per acre per year was expected to cover the annual maintenance costs of $40,000-$50,000.00 and to generate an annual profit of at least $90,000.00. He also mentioned the presence of 24,000 acres of Hudson's Bay Company land and 25,000 acres of school land as assets, though he did not itemize the expense of acquiring them. Nor did he consider the length of time involved in obtaining the return which he predicted, or include the cost of selling the land. Looked at uncritically, the report presented a very desirable investment opportunity. Seemingly, none of the principals noted, or were concerned about, its omissions.

On 18 September, 1906 the Canadian Agency bought the project from the Robins Irrigation Company and then immediately resold it, in October, to another company, established to develop it. On 11 October the Southern Alberta Land Company issued its prospectus.[42] The company was to be capitalized at £500,000 ($2,065,000.00), the subscription to

TABLE 1

PROJECTED EXPENSES AND REVENUES, ROBINS IRRIGATION COMPANY, 1906

Expenses	
Land @ $3.00 per acre (less reduction for works)	$ 380,573.00
Cost of works	1,000,000.00
Grand Forks Cattle Company assets	557,679.50
Total	1,938,252.50
Revenue	
Sale of ranch assets	500,000.00
85,000 acres, irrigated, Tract "A", @ $23.00 per acre	1,955,000.00
59,323 acres, dry, Tract "A", @ $12.50 per acre	741,537.50
10,143 acres, irrigated, Tract "B", @ $20.00 per acre	202,865.00[43]
226,107 acres, dry, Tract "B", @ $5.00 per acre	1,130,533.75
Total	4,529,936.25
Excess of revenue over expenses	$2,591,683.75
Margin of profit	57%

be handled by Chaplin, Milne, Grenfell and Co. Ltd., who were also to be the company's principal bankers. The Board of Directors included representatives of all of the parties interested in the scheme: A.E. (sic) Hitchcock and J.D. McGregor of the Grand Forks Cattle Company and Robins Irrigation Company, the latter named Managing Director; G.S. St. Aubyn of the Robins Irrigation Company and the Canadian Agency; as well as Maj. Gen. Ronald B. Lane, who became Chairman; W.H. Ellice, a director of the Western Canadian Land Co. Ltd.; Frederick Baynes, a director of the London and Northwestern Railway Co.; and W.J. Challis, who was appointed Secretary.

The prospectus clarified for the first time the web of financial dealings which had occurred in marketing the scheme. In order to acquire the contract between the Crown and the Robins Irrigation Company (known as Contract No. 1), which authorized the construction of the project and arranged the land sale, the Southern Alberta Land Company had to settle the interests of a number of claimants. The Robins Irrigation Company had sold its interest in Contract No. 1 to the Canadian Agency for £100,000 ($413,000.00), payable in cash or for £10,000 ($41,300.00) in cash and the balance in shares of the operating company, as yet unformed. The assets of the Grand Forks Cattle Company had also been sold to the Canadian Agency for £135,000 ($557,679.50) cash or £45,000 ($187,750.00) in cash and the balance in shares. The Canadian Agency, in its turn, sold those assets to the Southern Alberta Land Company for £300,000 ($1,239,000.00); £133,333 ($550,665.29) in shares of the company, the remainder, £166,667 ($688,334.71), in cash. The Southern Alberta Land Company also bought

the interest of E.H. Cuthbertson, one of the original applicants, for an undisclosed sum. Though it is not referred to, it is likely that a similar payment was made to Guy Tracey Robins.

The returns to certain of the principals from these convoluted transactions were remarkable. The shareholders in the Grand Forks Cattle Company, who had only recently raised its capitalization to $500,000.00, received $557,679.50 for assets probably worth no more than $300,000.00.[44] The Robins Irrigation Company, namely Hitchcock, McGregor, and St. Aubyn, received $413,000.00 for virtually no outlay whatsoever, since all they had to sell was Contract No. 1, for which little could have been expended. The Canadian Agency realized a profit of $268,320.50, for having arranged the transfer of assets. During the transfer the Agency was required to spend £55,000 ($227,150.00) in cash and received £167,667 ($688,334.71), an immediate cash profit of £112,667 ($461,184.71). The discrepancy between the Agency's cash profit and its overall profit was due to its taking a smaller quantity of stock than it had to pay out in its turn. Presumably, the Agency's creditors accepted a larger cash settlement than had originally been agreed.

All of the early principals gained substantial cash payments but still retained one quarter of the issued shares of the Southern Alberta Land Company. The transactions had withdrawn $1.2 million from the Company's available capital, making the scheme a much less profitable enterprise than Saunder's projections had allowed. The prospectus projected expenditures of $2,619,573.00, an increase of $681,320.50

over Saunder's estimates. The excess of revenue over expenses was reduced to $1,910,363.25, still a 42% profit margin.

The Southern Alberta Land Company and its investors were seemingly satisfied with the financial arrangements, despite the heavy speculative withdrawals. Others, however, were less forgiving and no sooner had the announcement of the Southern Alberta Land Company bargain been made than it began to draw strenuous criticism from many sources. The project's critics had become inquisitive very soon after the first applications were submitted to the Department of the Interior. On 16 April, 1906 Maitland Stewart McCarthy, Conservative M.P. for Calgary, had asked Frank Oliver, Minister of the Interior, for a statement of land sales applications presently under consideration and had been informed of, among others, the applications of Robins and Cuthbertson [illegible] wh[illegible] nothing had yet been decided.[45] It [illegible] likely that [illegible] initial inquiry was no more than part of the Opposition's persistent efforts to embarrass the government with evidence of its shortcomings.

Announcement of the organization of the Southern Alberta Land Company and its acquisition of an irrigation land sale authorization was proof not only that a decision had finally been made but that some peculiar dealings had occurred since the time of the first applications. Suspicion was voiced almost instantly, firstly in the newspapers. On 31 October, 1906 the Calgary Herald denounced the scheme under the headline, "Another Grab of Government Land", arguing that the government should not sell land for $1.00 per acre which the Southern Alberta Land Company prospectus proposed to sell for a minimum of $5.00 per acre. It

proposed that the project might have been more reasonably undertaken as a public work.[46]

On 21 November, 1906 Oliver recommended approval of the transfer of the Robins Irrigation Company agreement to the Southern Alberta Land Company.[47] Only a week later the Opposition began an extensive questioning of the government to discover details of the transaction. Robert Borden led off on 28 November with a request for all relevant material connected with the Robins Agreement. From then until the end of January, 1907 questions were asked concerning the Robins Agreement, the McGregor and Hitchcock leases, the transfer of the leases to the Grand Forks Cattle Company, prior applications to irrigate land within the Robins Project, and whether John Stewart, Commissioner of Irrigation, had been asked to report on the Robins scheme prior to its approval.[48] In the last instance, Oliver was forced to admit that no report had been requested, a telling admission, considering later events, which was not pursued by the Opposition.

On 5 February, 1907, the questioning ended and the Opposition turned to the attack. In an amendment to a motion to reconvene as the Committee of Supply, McCarthy moved that

> This House, while favorable to every reasonable undertaking for the development and colonization of that portion of the Canadian west which can be made suitable for agriculture only by means of irrigation, condemns the action of this government in the matter of the Robins Irrigation contract, being of the opinion that the government has failed to safeguard the rights of the people, has subordinated the public interest to that of speculators, and has, for the benefit of certain favourites of this administration, permitted the enterprise to be overloaded with promoters' profits which must in the end be paid by future settlers.[49]

The Opposition was, by then, well informed on the matter and was determined to press the case for maximum embarrassment. Much of their information, of course, came from the very revealing prospectus of the Southern Alberta Land Company, supplemented by gleanings concerning the Grand Forks Cattle Company and its principals.

In alluding to the scandalous nature of the Robins transaction, the Opposition presented an alternative policy for the consideration of the government. Citing the large advances in land values being promised by the promoters, for relatively small capital investments, the Opposition objected that the profits were, at the same time, being lost to the government through its cut-rate price and gouged from the eventual settlers. They proposed that irrigation projects could be more cheaply constructed and marketed as public works, thereby benefitting both the government and the settler through modest and realistic land prices. Robert Borden, Leader of the Opposition, cited the U.S. Reclamation Service as a model for government involvement in irrigation development.[50]

It was a very one-sided debate. The Liberal government made little attempt to rebut the accusations, depending, no doubt, on their absolute majority to defeat the motion of censure. Only Frank Oliver responded extensively to the Opposition's charges, and then only early in the debate. He stated that all transactions had not only been legal but had complied with the intent of the government's irrigation policy. He defended the ultimate land prices as legitimate for a private enterprise which must repay its expenditures through enhanced land values. He claimed that the government's interests were adequately protected and

that the revenue to be obtained from the sale was not nearly so important as the future revenue to be obtained from the successful settlement of the project.[51]

One other Liberal, A.K. MacLean of Lunenburg, scoffed at the suggestion that the government should construct such projects. He could see no reason why the government, ill-equipped to engage in such an undertaking, should divide its energies in settling the west when private interests were prepared to do the work.[52]

Inevitably the government prevailed. In a straight party vote, the government defeated the amendment 86 to 53. Only Henri Bourassa broke Liberal party ranks.[53] Thus ended the only legislative debate on the project.

The resolution of the political dispute in the House of Commons, achieved by the defeat of the Opposition amendment, in no way answered the criticisms brought to bear on the marketing of the scheme. During the course of a hectic few months, a small group of promoters had obtained an authorization to construct an irrigation project and had sold it at a handsome profit. They had structured the scheme in such a way that other assets, those of the Grand Forks Cattle Company, could also be sold at a handsome profit. Their speculation was a consequence of the observed effect which irrigation investment had on land prices. If the price of ordinary land could rise far above the cost of irrigating it, there was plenty of room to extract profit merely by marketing an interest in irrigable property or an authorization to build an irrigation system.

It is clear from the activity of the promoters, the acquiescence of the Southern Alberta Land Company and the approval of the government that few considered the speculative withdrawals to be either particularly dishonest or in any way harmful to the prospects of the scheme. That the promoters were prepared to accept part payment in stock indicates that they, too, despite their cynical profiteering, were confident about the ultimate success of the project and would stay in to share further profits. The economic rationale upon which irrigation developments were undertaken, that construction would be paid for by land sales, was unquestioned. No one seemed to consider that there might be limits to a settler's ability to pay for land.

Footnotes

1. The North West Irrigation Act, Sec. 32.
2. Martin, p. 163.
3. Hedges, p. 388.
4. Martin, p. 26.
5. William Pearce to Cornelius Van Horne, 31 October and 23 December, 1895; Pearce, ff. 9/2/7/3-11.
6. See Hedges, p. 154; den Otter, "The Galts and Irrigation", pp. 25 and 30. The A.R. & I. Co. figure is based on expenditure of $600,000.00 to irrigate 500,000 acres @ 40% irrigable land.
7. A.A. den Otter, Irrigation in Southern Alberta, Occasional Paper No. 5. (Lethbridge, Alta.: Whoop-up Country Chapter, Historical Society of Alberta, 1975), p. 23; Hedges, p. 180.
8. Hedges, ibid.
9. Hedges, p. 184.
10. Perley G. Keyes, Secretary, Department of the Interior, to Arthur Hitchcock, 22 May, 1902, Canada, Dept. of the Interior, Timber and Grazing Branch, ff. 1244-419067, PAC; extract of Privy Council Report, 24 December, 1904, Canada, Sessional Papers, Vol. 10, No. 25, 1904, p. 70.
11. Breen, p. 247.
12. Breen, p. 257.
13. It was, in fact, part of a tract, roughly in the centre of Palliser's Triangle, which did not see vigorous settlement until 1906-1911 and experienced massive de-population, 1918-1926. W.A. Mackintosh, Prairie Settlement: The Geographical Setting. (Toronto: Macmillan, 1934), pp. 69-74.
14. Who's Who in Canada, 1934-35. (Toronto: International Press, 1935), p. 157.
15. John W. Dafoe, Clifford Sifton in Relation to His Times. (Toronto: Macmillan, 1931), p. 11.
16. David John Hall, "The Political Career of Clifford Sifton, 1896-1905". (Ph.D. dissertation: University of Toronto, 1973), p. 274.

17. James Duncan McGregor to Clifford Sifton, 14 March, 1898 and 11 April, 1898, Clifford Sifton Papers, Vol. 48. PAC.

18. See, for example, Arthur Hitchcock to Clifford Sifton, 20 January, 1900, Sifton, Vol. 81.

19. Hall, pp. 393 and 643.

20. Order-in-Council, 22 May, 1902, Timber and Grazing Branch, 1244-419067.

21. McGregor to Sifton, 24 November, 1902, Sifton, Vol. 128.

22. Extract of Privy Council Report, 24 December, 1903, Timber and Grazing Branch, ff. 1244-419067.

23. Debates, Vol. 79, 1906-07, Dr. William J. Roche (Marquette), 5 February, 1907, p. 2514.

24. Minutes of shareholders meeting, Grand Forks Cattle Company, 12 September, 1903, Canada Land and Irrigation Company Papers, ff. 1055. GAI.

25. Minutes of extraordinary meeting, Grand Forks Cattle Company, 7 November, 1905, ibid.

26. General map showing area included in the scheme of the Canadian Pacific Irrigation Coy., Alta., 1 August, 1903, Pearce, ff. 9/2/7/6-8.

27. Pearce, ff. 9/2/7/3-11.

28. Canada, Privy Council, Order-in-Council No. 1434, 22 August, 1903, Timber and Grazing Branch, ff. 1244-419067.

29. Hedges, p. 58.

30. Financial statement, Grand Forks Cattle Company, 8 September, 1904, Canada Land, ff. 1055.

31. Financial statement, Grand Forks Cattle Company, 8 September, 1905, Canada Land, ibid. Two statements appear for the same date. The other itemizes the stock as 3,447 cattle, 693 horses, 6 stallions, and 51 sheep, valued at $113,179.81.

32. R.H. Campbell to G.V. Ryley, 8 September, 1905, Timber and Grazing Branch, ff. 1244-419067; Lyndwode Pereira, Assistant Secretary, Department of the Interior, to Grand Forks Cattle Company, Canada Land, ff. 1055.

33. Memorandum, n.d., Robert Laird Borden Papers, ff. 167-RLB49. PAC.

34. Samuel M. Genest to R.H. Campbell, 28 March, 1906; Frank Oliver to Governor-General-in-Council, 5 April, 1906, Canada, Water Resources Branch Papers, ff. 73-67-1. PAC.

35. Guy Tracey Robins to Minister of the Interior, 16 June, 1906, in Water Resources, ff. 73-67-1.

36. Agreement between Minister of the Interior and the Robins Irrigation Company, 26 June, 1906, Canada Land, ff. 20.

37. Prospectus, Southern Alberta Land Company, 11 October, 1906, Southern Alberta Land Company Papers, ff. 1. PAA; minutes, Grand Forks Cattle Company, 21 November, 1905, Canada Land, ff. 1055.

38. Debates, Vol. 76, Robert L. Borden (Leader of the Opposition), 30 May, 1906, pp. 4163-64, 4173-76; R.S. Lake (Qu'Appelle), 31 May, 1906, pp. 4253-55; Maitland S. McCarthy (Calgary), 1 June, 1906, pp. 4439-4442; Herbert B. Ames (Montreal-St. Antoine), 5 June, 1906, pp. 4600-07.

39. Ibid., pp. 4340-45.

40. Ottawa Evening Journal, 6 June, 1914.

41. Report of B.J. Saunders to Canadian Agency, 7 September, 1906, Canada Land, ff. 82.

42. Prospectus, Southern Alberta Land Company, 11 October, 1906, op. cit.

43. Assumes that only enough land would be irrigated in Tract "B" to fulfill contractual obligations. Irrigating more land would have presumably increased the profit.

44. Financial statement, Grand Forks Cattle Company, 9 September, 1905, ibid., ff. 1055.

45. Debates, Vol. 74, 1906, p. 1676.

46. Calgary Herald, 31 October, 1906.

47. Report of Minister of the Interior to Governor-General-in-Council, 21 November, 1906, Canada Land, ff. 20.

48. Debates, Vol. 79, 1906-07, Robert L. Borden, 28 November 1906, p. 240; Herbert B. Ames, 3 December, 1906, p. 482 and 491-2; Herbert B. Ames, 17 December, 1906, pp. 1060-61; Herbert B. Ames, 28 January, 1907, p. 2143.

49. Ibid., Maitland Stewart McCarthy (Calgary), 5 February, 1907, pp. 2497-98.

50. Ibid., Robert L. Borden (Leader of the Opposition), 7 February, 1907, p. 2683.

51. Ibid., Frank Oliver (Minister of the Interior), 5 February, 1907, pp. 2504-08.

52. Ibid., A.K. McLean (Lunenberg), 7 February, 1907, p. 2695.

53. Ibid., p. 2725.

Chapter 2 The Southern Alberta Land Company: McGregor, 1906 - 1912

It has been seen that the Bow River Irrigation Project was devised and promoted primarily for the quick speculative benefits that could be obtained. It is not surprising, therefore, that the lands selected for the project and the initial proposals for watering them were not well chosen to produce an efficiently run irrigation system. Nor is it surprising that, concurrently with the political furore already discussed, the irrigation community in Southern Alberta began to subject the scheme to much criticism.

The most telling criticisms came from William Pearce, whose credentials in the irrigation community were unassailable. During the course of his career with the Department of the Interior, he had examined the entire irrigation country and knew the irrigation potential of every source of water and every tract of land in the territory. He saw no virtues in the scheme, and was prepared to air his views at length to those who sought them. In response to an enquiry by John Stoughton Dennis, Superintendent of Irrigation for the Canadian Pacific Railway, Pearce prepared a detailed critique.[1]

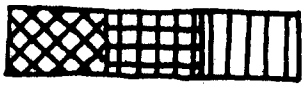
Based on his own knowledge of the country, Pearce considered that the proposed intake site for the northern tract, in Sec.35-18-18W4 (see Map 4) was an impossibility. Water could not be withdrawn from the river at that point or delivered in adequate quantities to the land unless the canal capacity and rate of flow were ridiculously high. Due to the broken nature of the land, with numerous cutbanks and ravines

MAP 4

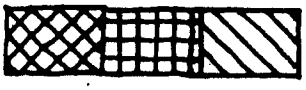
Irrigation proposals, 1906-1908

Southern Alberta Land Company, 1906.06.25

Land to be retained or acquired, 1908.03.09



Land to be retained or acquired, 1908.06.01

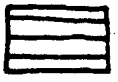


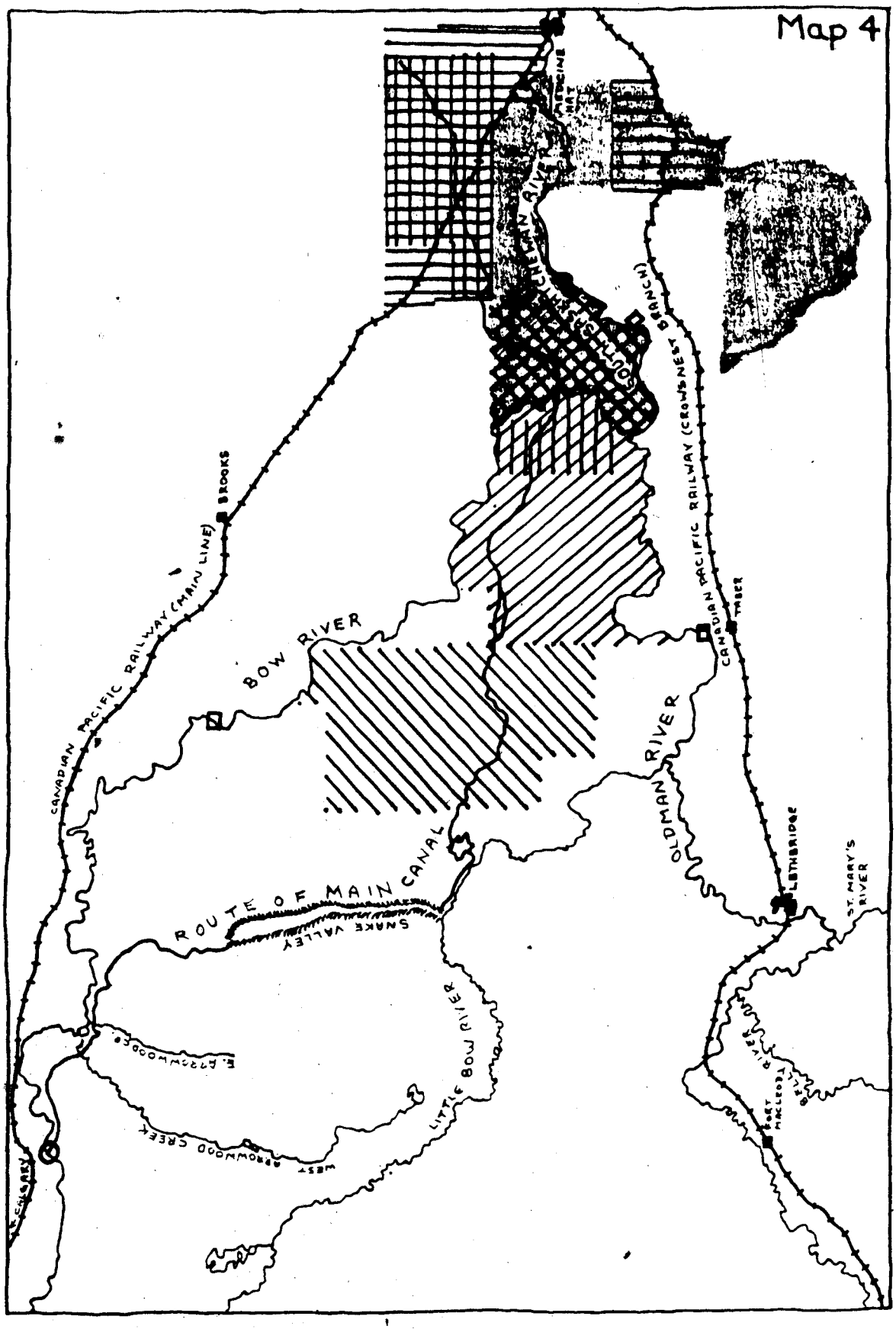
F.L. Wilson and British-American Land and Investment Co.

F.P. Aylwin and Canadian International Colonization Co.

Grand Forks Cattle Co. leases

Maunsell lease




Map 4
BROOKS
CANADIAN PACIFIC RAILWAY (MAIN LINE)
BOW RIVER
CANADIAN PACIFIC RAILWAY (CROWSNEST BRANCH)
TABER
OLDMAN RIVER
ROUTE OF MAIN CANAL
SNAKE VALLEY
LETHBRIDGE
ST. MARY'S RIVER
LITTLE BOW RIVER
WEST
CHIN COULEE
FORT MACLEOD

along the river valley, and the low incline of the river in that area (less than three feet per mile) water would have to be raised 152 feet above the river bed, requiring a dam 172 feet high and 1500 feet long at its top. The cost of such a dam would be prohibitive. Even then, Pearce doubted that 85,000 acres could be irrigated from the intake. In order to bring the water out of the valley, a canal would have to wind through miles of ravines and cutbanks, producing a much longer canal than the 32 miles promised.

So far as the scheme for the southern tract was concerned, Pearce dismissed it in few words. "To depend for irrigation on melted snow, would be to depend on a broken reed." Only by pumping water from the Belly (Oldman) River into Horsefly Lake could an adequate and dependable supply of water be obtained. Such an undertaking would require a 200 foot lift, which would again be very expensive. In all, Pearce was singularly unimpressed with the venture.

Charles A. Magrath, in charge of the Alberta Railway and Irrigation Company, was also mystified by the scheme. He inquired of Pearce whether the capacity of the Bow River was sufficient to support another major irrigation project.[2] It was Magrath's understanding that the river's flow was totally subscribed by the C.P.R. Pearce's response was decidedly less diplomatic than his memo to Dennis.

> Unless my recollections of the physical conditions along the Bow River are altogether astray, this scheme is financially impracticable. If I am correct, it is a gigantic fraud, and I am astonished at Saunder's lending himself to it. I presume you know who is behind it. A graft by Members of Parliament and Senate, an ex-Cabinet Minister or Ministers; prominent government officials, or ex-officials. What is the country coming to?[3]

Pearce confirmed that the C.P.R. had all ordinary flow of the river. A scheme involving storage, which this scheme did not, could obtain sufficient supplies from the flood stage. Magrath acknowledged Pearce's condemnation and remarked,

> I have thought that the only virtue in the proposition was in that portion north of the Saskatchewan River. From your report, however, even that looks as being very questionable.[4]

Unfortunately, the Southern Alberta Land Company's British officers did not have the benefit of all this criticism. Nor had they had access to any official evaluation of the project, since the Superintendent of Irrigation had not been consulted by the government before it approved the scheme. Throughout the early years of the project's development it was under the control of J.D. McGregor, who was the British company's only source of information.

Even McGregor could not ignore the physical difficulties which Pearce had outlined in his reports. The new company began to survey the project's works in January, 1907, under the direction of J.G. McIntosh, who had done the preliminary survey for the Robins Irrigation Company. McIntosh was, however, soon replaced by an engineer named Arthur M. Grace. He quickly recognized the impossibility of the canal location and began looking for alternative plans to obtain water. In an early report to McGregor he stated that thirteen miles of canal had been located but that it would require very heavy work to build it because of the low slope of the river. He recommended a search for natural gas to provide fuel for a pumping system, which he considered to be less costly to maintain than 100 miles of sidehill canal running through bad

country.[5] In subsequent reports Grace developed his alternative scheme, claiming that a pumping system could serve 100,000 acres north-east of the intake site (see Map 4).[6] According to Grace, "eminent engineers" agreed that the pumping scheme was a "sound and sensible commercial proposition." However, the expense could only be justified if land north and east of Tract "A" were brought under water from the pumping operation. The land could be obtained by exchanging Tract "B", south of the river.

Investigations into the irrigation of Tract "B" had, if anything, been more discouraging than those for Tract "A". Dependence on melt water had, indeed, proved illusory. Pumping water from the Belly River to supply the relatively small acreage of the tract would be prohibitively expensive. The tract's only value, it seemed, lay in exchanging it for more serviceable land.

News of the pumping scheme merely confirmed the opinions of the project's chief critics. William Pearce met Grace at the Irrigation Convention in Calgary on 29 July, 1907, and observed later,

> I inferred from him that [the project] was a fraud so far as a gravity irrigation proposition is concerned, the only thing that could be done was by pumping and that was a very high lift.[7]

In conversation with John Stewart, Superintendent of Irrigation for the Department of the Interior, Pearce learned that his view was shared by many others who had talked to Grace and that Stewart saw trouble for the government if the Opposition, particularly Maitland McCarthy, got wind of it.

> Stewart stated that there was no doubt that McGregor and associates were frauds, and should be sent to Penitentiary.[8]

There were rumours afloat that McGregor and Grace had already bought three pumping plants in Chicago for $85,000.00 per plant, and were drilling for gas to run them.

In fact, by March, 1908 $50,000.00 had been spent in exploratory drilling for natural gas, but no adequate supplies had been found. Nevertheless, the company requested an exchange of land in order to pursue the new scheme of development (see Map 4).[9] By then, however, the pumping proposal was already losing favour with McGregor and Grace because of another, more attractive, idea.

McGregor and Grace were contemplating the takeover of a scheme just to the west of their own (see Map 4). On 8 May, 1906 Francis Percival Aylwin of Ottawa had applied for the right to irrigate land on the west side of the Bow River.[10] He proposed to irrigate with water drawn from the Bow and Little Bow Rivers. John Stewart had not considered the scheme practicable because all river flow in the area was subscribed except for that in the Belly (Oldman), which was not a suitable source.[11] W.W. Stuart, Inspector of Ranches, thought it unreasonable to injure the grazing rights of the ranchers in the area.[12] But the proposal had some political support to push the application along. Camille Piché, M.P. for Montreal-Sainte Marie, who had an undetermined interest in the scheme, wrote to Frank Oliver, Minister of the Interior, complaining about Stewart's report. He claimed that the high water flow of the Bow was more than sufficient to supply the project and that he was prepared "to take all the risks" of proving its feasibility.[13]

Although the initial application had made no mention of supplying storage, which was the only way that the high water stage could be used, Aylwin applied for right to use the high water stage along with a request for a departmental examination of his scheme.[14] But when John Stewart met the project's representative in Calgary, he discovered that no plans had been prepared. He did admit, however, that sufficient water was available at high stage and noted that an irrigation scheme prepared by William Pearce might be used to supply the project.[15]

Pearce had surveyed the country between the Bow and Oldman Rivers in 1901. In his report to the Minister of the Interior he had laid out the general outlines of the scheme. Water would be taken from the Bow River and chanelled into Snake Valley, a natural reservoir site, and from there into other reservoirs and a large irrigable territory. He had estimated that 70,000 acres in the Blackfoot Indian Reserve, 50,000 acres west of Snake Valley, and 420,000 acres east and south of the valley could be brought under the canal.[16]

No action had been taken on his report. Pearce had offered the scheme to the C.P.R., to be part of their Irrigation Block, but the Railway had decided that the scheme to the north of the Bow River was all they could reasonably take on.[17] An investor from the United States looked at it briefly but decided that the likelihood of heavy competition from the C.P.R. to the north and the Alberta Railway and Irrigation Co. to the south made it a risky venture, a significant observation considering subsequent events.[18] Aylwin's project lay within the territory covered by Pearce's scheme and the promoters quickly adopted Stewart's suggestion and proceeded with their plans.[19]

Based on the use of Pearce's proposal, Stewart declared the project feasible.[20]

McGregor and Grace became interested in the Aylwin project as their own floundered. Grace examined the proposal early in 1908 and declared it a "heavy but not impossible venture."[21] He questioned some of the estimates of canal work, especially the depth of a cut needed to penetrate a ridge separating the Bow River Valley from the Snake Valley, and the length of sidehill work along Little Bow River below Snake Valley. But the reservoir itself was the "finest I ever saw", saving 20 miles of canal construction, "and the dams are a mere trifle".[22] Grace proposed to take over Aylwin's canal scheme, extend it beyond Aylwin's tract, through the Maunsell ranching lease, just west of the Bow River, and across the Bow River to Tract "A". He estimated the cost at $860,000.00.[23] He further recommended that Tract "B" once again be used as exchange, this time for land west of the Bow River.[24]

Therefore, only three months after requesting an exchange of land to facilitate the pumping project, a new exchange proposal was submitted to the government. The change was justified with the explanation that users might be unwilling to depend upon the steady gas supply which would be required to operate the pumping system.[25]

By then, however, the government found itself faced with five applications to construct essentially the same project (see Map 4).[26] Of these only the Southern Alberta Land Company actually possessed permission to construct an irrigation scheme; of the others, Aylwin was already negotiating an agreement, while F.L. Wilson, the Canadian International Colonization Company, and the British-American Land and

Investment Company applications had been made after Aylwin's. Even Aylwin's application had technically lapsed in November, 1907 when he failed to provide details of his proposal in sufficient time.

Officials of the Department of the Interior had only one overriding demand. They insisted that no company get control of the canal route unless it was prepared to irrigate a large amount of land. McGregor's application had the support of the Medicine Hat Agricultural Society, which saw it both as a source of work for local farmers and as the means of relief from the drought presently hampering agriculture in the area.[27] He was also seeking to have Aylwin's scheme combined with his own, with Aylwin drawing water for his land from the Southern Alberta Land Company canal.[28]

On 9 September, 1908 the Southern Alberta Land Company exchange was approved.[29] The exchange relieved the company of all of Tract "B", south of the South Saskatchewan River and most of the original tract to the north of it (see Map 5). Only the land in the Grand Forks Cattle Company leases remained in the reorganized project. Because the land west of the Bow River did not fully replace the land discarded, a tract to the north and east of the Grand Forks land was added, fulfilling the original sales agreement. It consisted of much of the land requested for the pumping scheme.

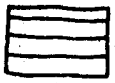
The Southern Alberta Land Company's project distorted the scheme as laid out by Pearce in a number of important points. Pearce had based his economic assessment of the scheme on providing water along the entire route of the main canal. But the Southern Alberta Land Company and Aylwin tracts lay at the east end of Pearce's block,

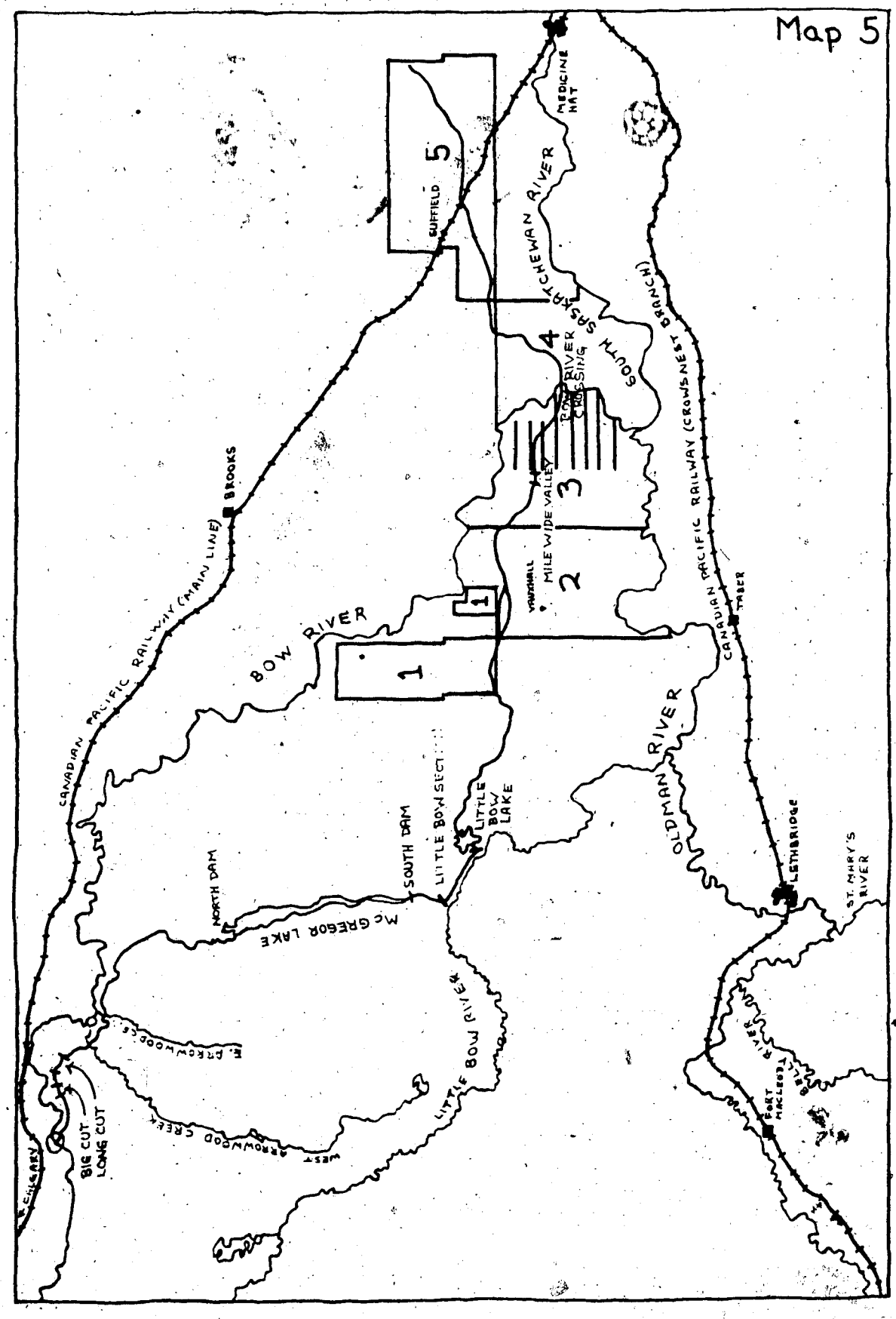
MAP 5

Bow River Irrigation Project, 1908-1927

1. Alberta District (also known as Aylwin tract, Alberta Land Co.)
2. Western District
3. Central District
4. Bungalow District
5. Suffield District

Maunsell lease




Map 5
SUFFIELD
5
MEDICINE HAT
SASKATCHEWAN RIVER
SOUTH SASKATCHEWAN RIVER
4
RIVER CROSSING
FORT
3
VAUXHALL
MILE WIDE VALLEY
2
1
1
BROOKS
CANADIAN PACIFIC RAILWAY (MAIN LINE)
BOW RIVER
CANADIAN PACIFIC RAILWAY (CROWSNEST BRANCH)
TABER
OLDMAN RIVER
LITTLE BOW LAKE
LITTLE BOW SECT.
SOUTH DAM
NORTH DAM
Mc GREGOR LAKE
LITTLE BOW RIVER
LETHBRIDGE
ST. MARY'S RIVER
E. PRAIRIE WOOD CREEK
WEST PRAIRIE WOOD CREEK
BIG CUT
LONG CUT
CALGARY
FORT MACLEOD

requiring the construction of 110 miles of canal which were, for the company, through barren country. Pearce had not envisioned moving water across the Bow River to water land east of it. To do so would require the construction of a 600 foot long bridge and 16,000 feet of syphon to cross the river valley. After reaching the western limits of the project another 200 miles of main canal would have to be dug to reach the most easterly land, making it, at the time of construction, the longest main canal in North America.[30]

The reasons for retaining land east of the Bow River had nothing to do with the construction of an efficient, economical irrigation system. It is likely that the principals, particularly McGregor, were unwilling to admit, by a total abandonment of land, that the original scheme had been very badly conceived. At the very least the Grand Forks tract had to be kept within the project boundaries or the purchase of the Cattle Company's assets could not have been defended. The added cost and difficulties involved in carrying water across the river could only be accepted by spreading the expense over a larger irrigable acreage. Thus, the company accepted the block of land to the north east rather than taking more suitable land west of the Bow River, farther up the canal line.

Apart from the length of the canal, the company was faced with some difficult engineering problems when it finally began construction in 1909. The intake was located at a point where the river divided into two channels around Johnson's Island. Water was to be withdrawn [illegible] south channel through headgates and a 10 foot high, concrete [illegible] was built across the channel to raise the water level at the

intake. An earth dam had to be built across the island and connected to a spill dam built across the north channel, which was higher than the weir to ensure a good flow of water past the headgates.

The main canal, with a designed capacity of 1200 cubic feet per second, paralleled the river for five miles, requiring only one bank built against the slope of the valley.[31] To get the water out of the valley, however, required a major excavation through a ridge of land. Known as the Big Cut, it consisted of 6,200 feet of trench over sixty feet deep, involving the removal of 1,200,000 cubic yards of material. There was some question as to the most reasonable slope for the walls of the trench. Originally designed with a ratio of 1.5:1, it was eventually constructed with .25:1 slopes, on the advice of George G. Anderson, engineer for the Alberta Railway and Irrigation Company, who thought that the steeper slope would prevent the accumulation of snow, which could induce slippage.[32] Nor was the Big Cut the only major excavation. Immediately to the east of the Big Cut an 11,000 foot long, 20 foot deep section, called the Long Cut, had to be dug through another stretch of high ground.

To reach the Snake Valley the canal had to cross the West and East Arrowwood Creeks, which flowed intermittently in deep ravines. The crossings were made with a timber-box flume over the west valley and a wood-stave syphon over the eastern. Then, to drop the water gently down the sloping land to the floor of Snake Valley, five concrete drops were built. The valley itself, though a natural reservoir, had to be dammed at its north and south ends to increase its capacity to 360,000 acre-feet of water.

Beyond the Snake Valley, renamed Lake McGregor,[33] the project faced its most difficult section. The canal was cut into the hillside above the Little Bow River for a distance of twelve miles, through porous sandstone and shale, until a natural outlet could be reached in the valley, at which time the water would empty into a second, smaller reservoir. From there the canal followed an easy slope to the Bow River, hampered only by the need for a few concrete drops and by one depression, Mile-Wide Valley, which was crossed by a long timber-box flume. The difficulties of crossing the river have already been explained. East of the river two more reservoirs were planned before the eastern boundary of the project was reached.

The new project was to be much more expensive than originally envisaged. Preliminary estimates made by George G. Anderson were $1,976,500.00, almost twice the 1906 figure. Anderson produced figures, however, which continued to show the project as a tremendously profitable scheme. The revised project was calculated to have 210,000 irrigable acres, compared with only 95,000 acres for the previous scheme, which would produce $5,250,000.00 at $25.00 per acre. The remaining 190,000 acres of dry land would sell at $10.00 per acre, yielding a revenue of $1,900,000.00. Total revenue was, therefore, to be $7,150,000.00, for a profit of $5,174,000.00, not including the annual profit from operating charges.[34]

The company was, however, also undertaking a number of other significant expenses. In order to control all of the land within the project boundaries, the company took steps to purchase the Hudson's Bay Company and school lands in the tract. Arrangements for the purchase

of the school land were not well documented, but the Hudson's Bay Company purchase was. Negotiations for the purchase of 49,009.79 acres of land were carried out by the Canadian Agency, which acted as middle man for most of the transactions involving the project. The Canadian Agency bought the land at an average price of $13.50 per acre, paying $661,632.16, payable in six equal annual installments, beginning with the down payment, at 5% interest. The Agency then sold 22,966.00 acres to the Southern Alberta Land Company for an average price of $20.00 per acre, totalling $459,320.00, payable at one-half down and five equal annual installments thereafter, at 5% interest.[35] Under the arrangement the Canadian Agency earned a profit of $149,279.00 on the land sold to the Southern Alberta Land Company and an immediate cash profit as well. The first installment to the Hudson's Bay Company was $110,272.06; the Southern Alberta Land Company paid $229,660.00 to the Agency as a first installment, for a gain to the Agency of $80,381.00. Toward the end of negotiations with the Hudson's Bay Company, Arthur Grenfell of the Canadian Agency wrote to J.D. McGregor that the resale to the Southern Alberta Land Company would

> give us a profit and, I hope, enable us to make an arrangement with H.B.Co. for easy repayment terms. This will assist us in financing the deal without putting our hands in our pockets.[36]

McGregor, presumably acting in the interest of the Southern Alberta Land Company, made no objection to the arrangement, which had placed a $6.50 per acre surcharge on the Hudson's Bay Company land in the project.

The increased expenditure forecasts required capital beyond the original capitalization of the Company. To cover it the company's capital stock was increased from £500,000 to £700,000 and an issue of £300,000 in 5% debenture stock was floated.[37] A number of potential revenue-producing ventures were also pursued to supplement the eventual returns from the irrigation scheme and, more importantly, to generate that revenue during the period of construction.

Many of these were sources, not only of immediate revenue, but also of further expense. The first of these commitments was, of course, the Aylwin scheme. After the acquisition of Aylwin's canal route by the Southern Alberta Land Company, the government had approved Aylwin's application for an irrigation project, much reduced in size, on 21 January, 1909. By the agreement, approximately 69,275 acres were sold at $1.00 per acre. The land (see Map 5) was to be irrigated from the main canal of the Southern Alberta Land Company. An agreement to facilitate the arrangement was signed between the two companies on 1 April, 1911. The project was estimated to cost $500,000.00. The Southern Alberta Land Company committed itself to the construction of a main canal of sufficient capacity to serve both company operations and of a lateral canal to the Aylwin tract. In payment for its work, it would receive $10.00 per irrigable acre in the tract.[38]

By the time the agreement was signed, however, the Southern Alberta Land Company was no longer negotiating with Aylwin. On 17 November, 1909, Aylwin had transferred his interest in the project to the Alberta Land Company, Ltd. of Montreal. The stock in the company had, in turn, been acquired by the Ottawa firm of Smith and Johnston.[39] It was they

who finally signed the water rights agreement. But even they did not hold the company for very long afterward. On 26 May, 1911 the Canadian Agency entered into an agreement with the company for the purpose of forming a new company, also to be called the Alberta Land Company, which would acquire the assets of the old company, as well as certain assets already held by the Canadian Agency.[40] The new company was capitalized with 15,000 shares valued at $1,500,000.00 and it issued another $1,500,000.00 in shares of 5% debenture stock. With that money the new company bought the Aylwin tract for $1,411,020.50 in shares. It also purchased the remaining 26,043 acres of Hudson's Bay Company land held by the Canadian Agency for the same $20.00 per acre which the Southern Alberta Land Company had paid and at the same terms, even though only 3,520 acres of Hudson's Bay Company land existed within the Aylwin tract. The price for the Hudson's Bay Company property was $538,979.50 (actually $20.69 per acre). The Canadian Agency also threw in a "Lethbridge lot", which was priced at $50,000.00 In total the price of the Canadian Agency property transaction was $588,977.50, but the agreement called for payment by the transfer of $500,000.00 worth of the 5% debenture stock and $88,977.50 worth of company shares. By this series of transactions, a project which ought to have cost no more than $704,169.00 for the purchase of land and works was inflated into one costing $2,064,512.00, the greater portion of which was syphoned off in speculative withdrawals (see Table 2).

Even in its initial land sales, the revenues were compromised by obligations for further expenditures. Only two major sales were

TABLE 2

PROJECTED AND ACTUAL COSTS OF AYLWIN SCHEME, 1908-1911

PROJECTED (Based on direct acquisition of all land and agreement with Southern Alberta Land Company for water supply.)	
Crown land, 69,275 acres @ $1.00	$ 69,275.00
Hudson's Bay Company land, 3,520 acres @ $13.50	70,400.00
School land, 4,480 acres @ $14.40[41]	64,512.00
Cost of canal construction, estimated	500,000.00
	704,187.00
ACTUAL (Based on contracts with government, Southern Alberta Land Co. and Canadian Agency.)	
Crown land and construction, from old Alberta Land Co.	1,411,020.50
Hudson's Bay Company land, 26,043 acres via Canadian Agency @ $20.69	538,979.50
School land, 4,480 acres @ $14.40 (assuming land was not purchased through Canadian Agency)	64,512.00
Lethbridge lot	50,000.00
	2,064,512.00
Speculative withdrawals	
On Crown land and construction	841,745.50
On Hudson's Bay Co. land (based on price difference on land actually purchased	187,399.00
	$1,029,144.50

transacted during the initial period of construction, which seemed to be otherwise devoid of any effort to begin a sales campaign.

Of these two the more straight-forward sale was made to Clifford Sifton, who purchased 25,000 acres of land in three blocks at a price of $40.00 per acre, irrigable and $27.50 per acre, dry. The sale was originally negotiated with an option to buy another 50,000 acres before March, 1913. The sale was completed on 1 October, 1912, in the name of the Alfalfa Land Company.[42] Sifton's purchase marked the first sale of irrigable land in the project and established the company's market price for its property. The prices for both irrigable and dry land were well above all previous projections, and were probably higher than prices for comparable land in the C.P.R. project at that time.[43] Moreover, Sifton's intent was to resell the land to individual farmers at a profit, so that it is reasonable to suppose that both parties to the deal expected land prices to rise even higher.

The other "land sale" entered into by the Southern Alberta Land Company at this time was much more involved and, once again, included the Canadian Agency in the negotiations. In April and May of 1910 Arthur Grenfell, for the Canadian Agency, and J.D. McGregor, for the Southern Alberta Land Company, proposed the formation of a subsidiary, which would purchase a large tract of land from the latter, to put it under immediate cultivation, using large-scale, dryland farming techniques and, eventually, to resell it as small, partly improved farm units, irrigated from the project canal.[44] McGregor thought that the land, sold as broken land, cropped to alfalfa, would draw prices of $50.00-$75.00 per acre.

The first draft prospectus for Canadian Wheat Estates Ltd. detailed the financial arrangements.[45] The company was to be capitalized at £500,000 ($2,185,000.00) and it proposed the purchase of 51,200 acres of land; 26,200 irrigable, at £8 ($35.00) per acre, and 25,000 dry, at £4 ($17.50) per acre. The latter was described as land "not considered to need irrigation", though it was, in fact, only land which could not be irrigated from the canal or was not suitable for irrigation. Profits, based on expected productivity and price of wheat, were calculated at 29% on issued stock per year.

The company was finally organized as Canadian Wheatlands Ltd. with only minor changes in the arrangements. Of the issued stock only 350,000 £1 shares were sold. The company purchased 64,000 acres for £358,400 ($1,566,208.00) calculated at £7 ($30.59) per irrigable acre and £3. 10. 0 ($15.30) per acre, dry. It also placed an option on a further 56,320 acres at the same price until 31 December, 1914. The Southern Alberta Land Company received £256,000 ($1,117,820.00) over the first three months, the remainder to be paid in installments until 1918. For its part, the Southern Alberta Land Company guaranteed 5% dividends on shares of Canadian Wheatlands for two years.[46]

The land which Canadian Wheatlands purchased was the tract at the extreme eastern end of the project (see Map 5). It would, inevitably, be the last land to receive water when the irrigation system went into operation. There was also considerable doubt as to its suitability for dryland farming. When W.H. Fairfield, manager of the Lethbridge Experimental Farm, was approached to manage the farming operation, he declined, declaring himself "disappointed in the general character of

the land". He thought that the promoters expected too much from a tract which was not desirable for dry farming.[47] Nevertheless, the company pressed ahead with its scheme, under the management of James C. Murray, from the Brandon Experimental Farm. Its profit expectations were more modest than initially estimated, rising from 7% in 1911/12 to 20% in 1916.

As well as those schemes already mentioned, the Southern Alberta Land Company was also engaged in marketing lots in two townsites within the project, at Suffield and Vauxhall. Despite the disappearance of the pumping venture, gas exploration was also continuing. All of these ventures were designed to produce revenue, either immediately, to help finance the construction, or to increase the eventual returns to the investors. But all the deals were made in an environment which permitted the withdrawal of large amounts of capital into the hands of the principal promoters, usually through the good offices of the Canadian Agency. Given the optimistic profit forecasts, the withdrawals were probably thought to be no more than first installments on the eventual windfall, but they greatly inflated the debt load on the project, which would have to be recovered by land sales. By 1912, the project had access, theoretically, to over $7,000,000.00. Construction was near completion but had already cost $3,354,874.73,[48] almost twice George Anderson's 1909 estimate.

McGregor had been promising the completion of the project in his reports to the London office since June 1910.[49] But it was not until the 1912 season that construction reached the stage in which water could be expected to flow down the canal. Even then, only the land

west of the Bow River would be brought under water because the bridge/syphon structure was let out to contract only in June. However, all contour surveys, to determine the amount and location of irrigable land, had been completed and the purchase price on 380,573 acres had been paid to the government. The company had only to demonstrate its ability to irrigate 25% of the tract to fulfill its contract and obtain title.

But the 1912 season passed with no water entering the canal, because on 31 May, 1912 the headgate structure on the Bow River collapsed, along with a length of the weir. The collapse was subjected to numerous examinations by the company, government and consulting engineers. In the first official report on the failure, W.G. Bligh, Inspecting Engineer for the Department of the Interior, noted the causes.[50] The headgates had been constructed on a foundation improperly designed for the permeable riverbed on which it rested or for the head of water which would pound over the weir. A concrete apron below the weir had failed under the battering of the river, which had then undermined the headgate structure, until it and forty feet of weir sank into the resulting hole.

Bligh blamed the failure entirely on engineering error.

> The bed of the river is as sound a material as could be wished. The collapse was due, not to some unforeseen accident, due to the "treacherous" nature of the river bed, but simply to disregard, or crass ignorance, of the principles [of engineering] on the part of the Engineer who designed the works.[51]

Bligh had noted earlier[52] and stated again in his report that other problems with the headworks also existed. He considered the apron below the weir to be too short by twenty feet to protect the river bed from

the scouring action of the water flow. The weir had also been constructed in sections, with expansion joints running right through the structure, which left the weir prone to leakage (see Photo 1). It was also subject to leakage along its base because it had been improperly tied to its foundation. Further, he communicated his unease about the general workmanship of the headwork structures.

> Ugly rumours are afloat of the extreme carelessness with which the work was carried on whenever below water line, and are so persistent that credence must be given them.[53]

He wrote of concrete being poured into running water and of gaps in the structures being filled by throwing unopened bags of cement, stone and lumber into the forms (see Photo 2). He suspected that the entire weir was doomed to fail.

Of the two men responsible for the project's condition, Arthur Grace, the engineer, took the blame and was dismissed, though not until the fall of 1912. It seems likely that McGregor, who had been in charge of the project since the beginning and on whom the British Directorate depended for reports, concealed the seriousness of the collapse throughout the summer. It was not until September of 1912 that the British directors became acquainted with the state of the project, during the course of a well-publicized tour of Canada by prominent British politicians and businessmen. It was the first inspection of the project by any of the British officers and was intended to mark the formal opening of the company's works by no less a dignitary than Arthur, Duke of Connaught, Governor-General of Canada. Accompanied by Arthur Sifton, Premier of Alberta, C.W. Cross, Attorney General, and Charles Mitchell,

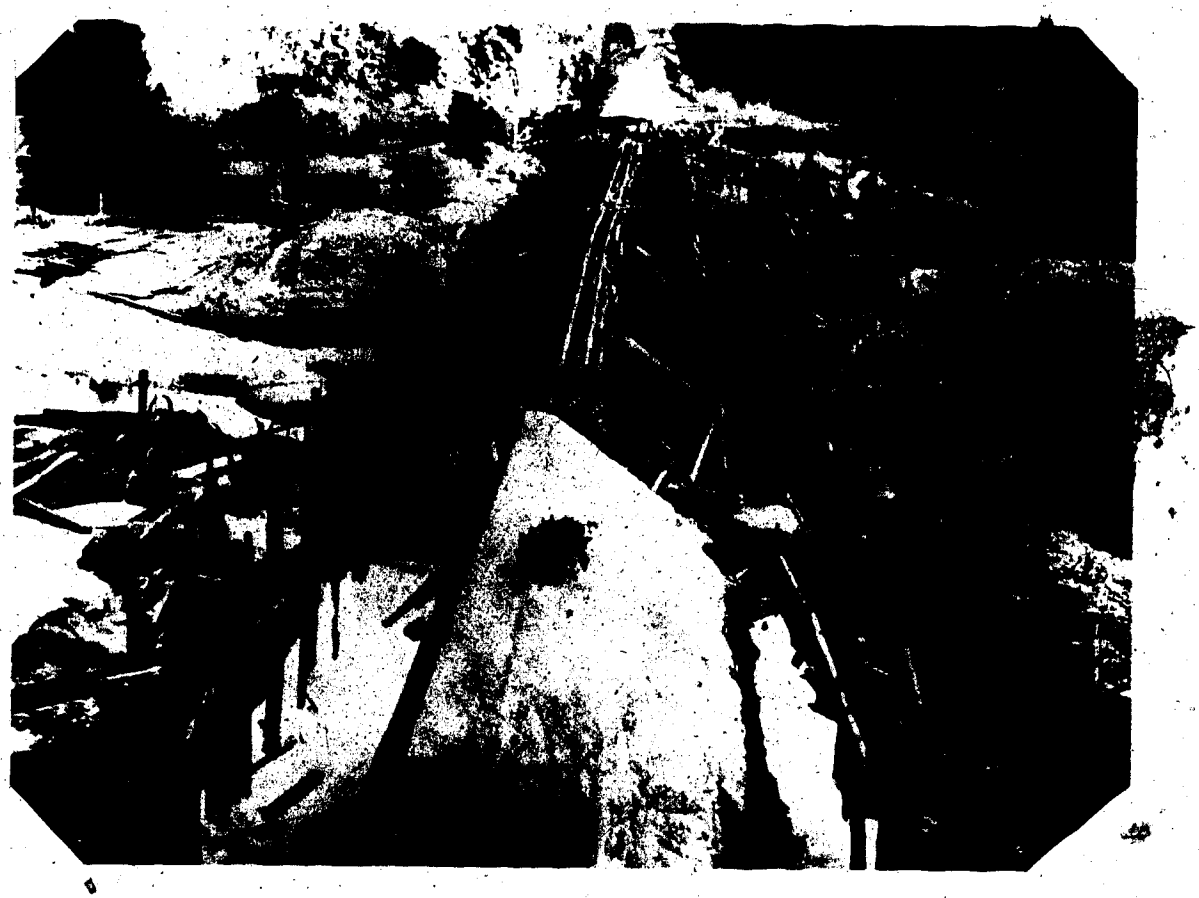


Photo no. 1 Weir under construction on Bow River, ca. 1911.

One section of the weir has already been completed. The joint with the section being formed up later leaked water. Canada, Dept. of the Interior. Water Resources Branch Papers, R.G.89, vol. 74, file 67-3. PAC.

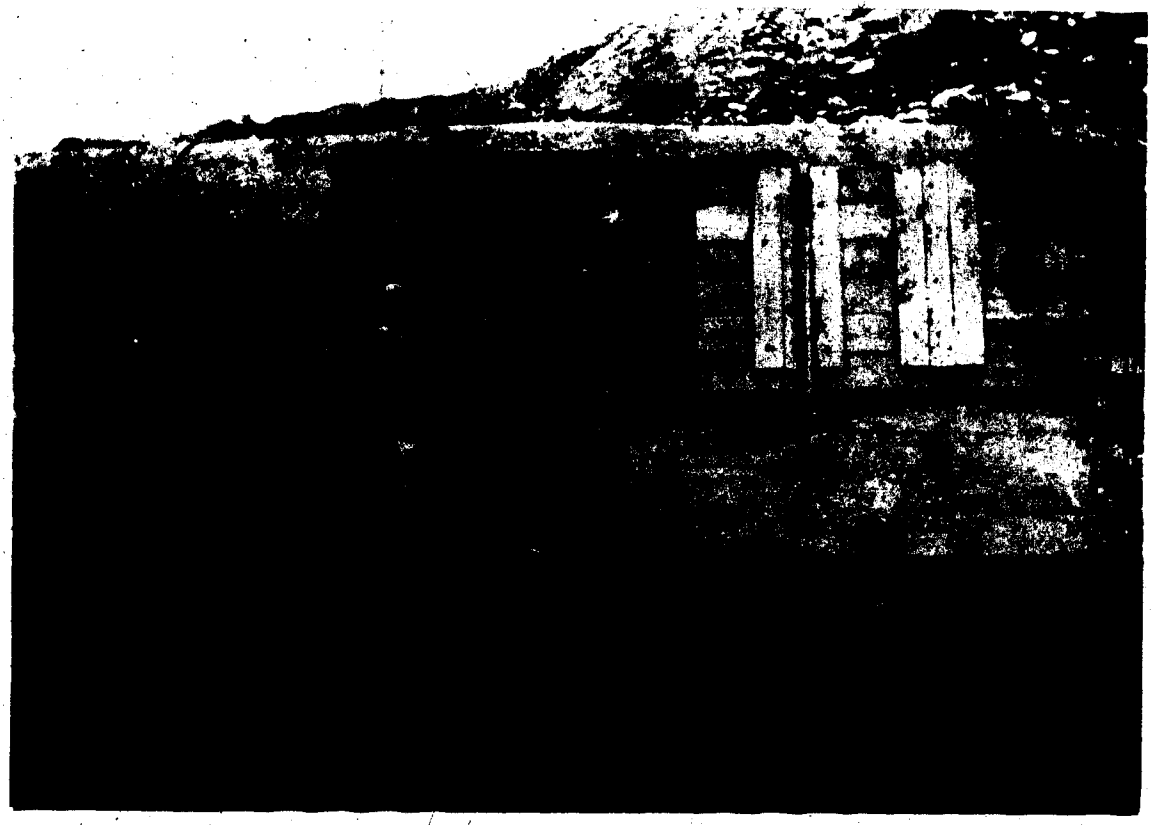


Photo no. 2 Detail of diversion weir, Bow River, 22 August, 1913

Photograph indicates a gap which was filled in with gravel, unopened bags of cement, scraps of wood. The weir is leaking at the bottom right of the gap. Canada, Dept. of the Interior, Water Resources Branch Papers, R.G. 89, vol. 75, file 67-4. PAC.

Provincial Treasurer, the party travelled by train from Calgary to Gleichen on 7 September, 1912. One eye-witness account of the event, though written long afterward, claimed that the British party were totally unaware of the collapse until the day of the opening and that, with the revelation of both the accident and the deception, McGregor was sacked on the spot.[54] Contemporary newspaper accounts do not fully confirm the story. The damage was referred to but glossed over and McGregor was fulsomely praised.[55] But it is unlikely that the British party had been fully aware of the extent of the damage or they would hardly have proceeded with the grand, vice-regal opening. McGregor survived in his position only a little longer than Grace, resigning on 31 December, 1912.[56]

Grace was replaced on 6 November, 1912 by David Walker Hays. Hays was born at Bridgeport, California on 24 March, 1878 and obtained a Bachelor of Science degree from the School of Mines, University of Nevada at Reno in 1900. His irrigation experience included employment on the Truckee-Carson Project in California, operated by the U.S. Reclamation Service, and, after 1903, as an irrigation consultant. He impressed the irrigation community of southern Alberta, as Grace had not.[57] Samuel G. Porter, Dominion Inspector of Engineering, stated that "he impresses me as an unusually competent man".[58] W.H. Fairfield remembered him years later as an outstanding engineer and a particularly able irrigation engineer.[59]

With the arrival of Hays, the project underwent a complete re-appraisal. Two engineering consultants, L.H. Taylor and R.G. Kennedy, examined the existing works and discovered that the

engineering inadequacies so evident in the headworks were matched along the entire length of the main canal.[60] Firstly, the canal had been built with too small a capacity to supply either Lake McGregor or the available irrigable land. Second, the steep slopes of the Big Cut were an impossibility. In fact, McGregor and Grace had already discovered that the Big Cut was subject to slides and had chosen to protect the channel by constructing a concrete conduit along the entire length of the cut. By 1912, 2,000 feet of conduit had been built, but Taylor declared it a total waste of money, which would have been better spent reducing the slopes.[61]

The dams at either end of Snake Valley were determined to be subject to seepage. The outlet in the south dam was declared inadequate and unsafe. The canal was, in many places, too steeply sloped and had curves which were too sharp (see Photo 3). The connections between the canal and the flume ends at West Arrowwood Creek were poorly designed and would likely wash out. The Little Bow Section would never take water without expensive repairs. Taylor thought that the whole idea of carrying water across the Bow River, though technically feasible, to be economically unrealistic.[62]

In short, the project works seemed to have been built with no thought to their eventual use, but had been considered, in Kennedy's words, "a mere adjunct to the land concession". Kennedy summed up the project's difficulties by noting that the works were plagued by bad design, inappropriate location and poor correlation of the various parts. He considered the works to have been undertaken "in rather a lighthearted way."[63]

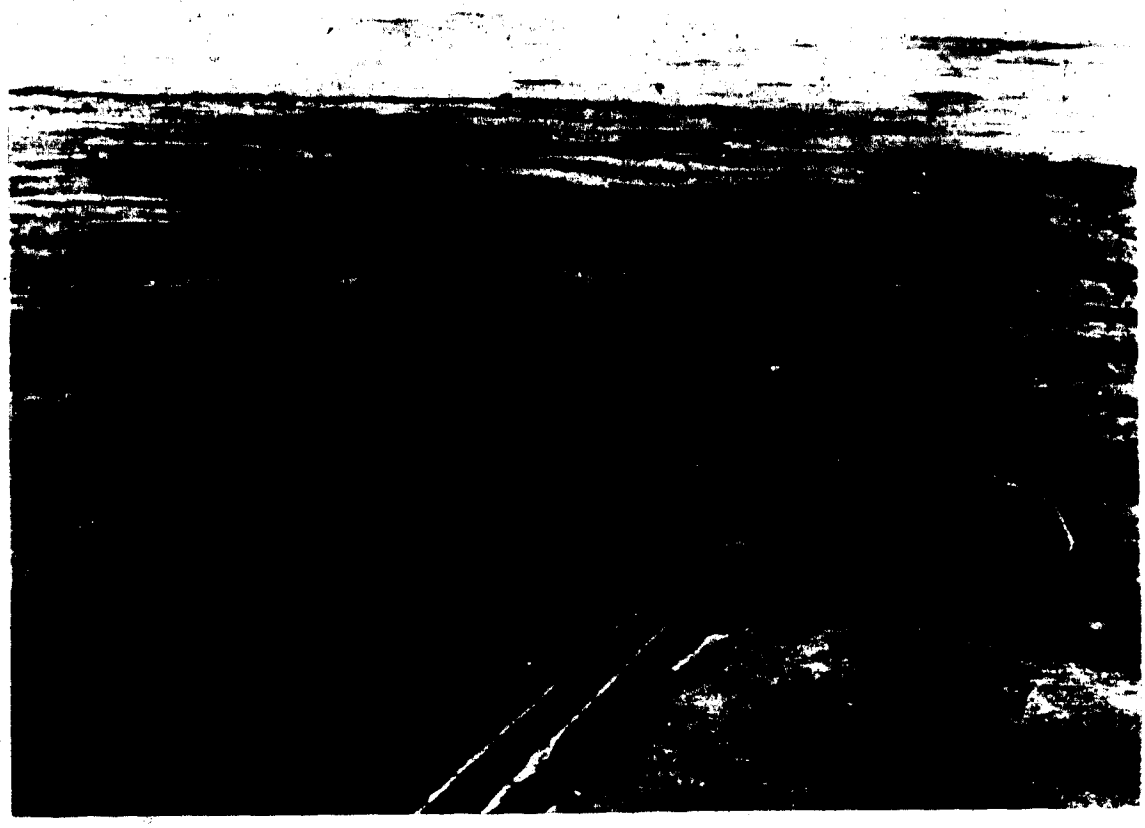


Photo no. 3 Aerial view of main canal, east of Bow River, ca. 1950.

Because the main canal east of the Bow was abandoned after the intake collapse in 1912, it still exists as it was originally laid out and constructed. The canal west of the Bow River was extensively repositioned by D.W. Hays. D.W. Kirk, The Bow River Irrigation Project: part 1, The History and Development of the Bow River Irrigation Project up to and including its Purchase by the Government of Canada in 1950. (Regina: P.F.R.A., 1955), p. 55.

Taylor estimated an additional expenditure of $2,392,000.00 to repair and complete the works, a figure with which Kennedy concurred. More than two million dollars was a large bill to pay on a project which had been thought to be near completion only six months earlier, particularly when $3,354,874.73 had already been spent on construction. A comparison of the money already spent on the various elements of the projects with that required to complete them provides a graphic picture of the wastage of funds which had been permitted (see Table 3).

Five and one-half years of management by McGregor and Grace had proven disastrous for the project. Ill-considered land selection, self-serving financial dealings and incompetent engineering had wasted valuable time and cost tremendous amounts of money. Nor were the political and administrative arms of the Dominion government immune from blame. The original request for a right to irrigate had been allowed by the Liberal government without reference to the opinions of senior Interior officers in the field. The speculators had been protected by the government, first in the House of Commons, then by allowing the exchange of land when the original scheme proved unworkable. Once construction got under way, Department of the Interior officials were lax in enforcing regulations concerning submission of plans and uncritical in their reports on construction progress.[64]

The depredations of the promoters and the wastage during construction greatly increased the cost of development which would have to be recovered from land sales. The time wasted by altering the boundaries of the project and the time required to correct the structural problems of the system would also lead to delays in making

TABLE 3

EXPENDITURES TO 1912 AND ESTIMATED COMPLETION COSTS AT NOVEMBER/DECEMBER 1912, BY DIVISION[65]

Division	Expenditure 1909-1912	Estimate to complete	Status at collapse
Headworks	$ 274,419.25	$ 115,000.00	Complete
Canal, Div. A incl. Big Cut, flume, & syphon	1,080,307.30	270,000.00	Complete, exc. Big Cut conduit
Lake McGregor	230,635.91	107,000.00	Complete
Canal, Div. B Incl. Little Bow Section	1,135,987.70	600,000.00	Complete
Bow River Crossing	90,552.45	175,000.00	Contracts let
Canal, Div. C	252,217.55	No estimate	Complete
Reservoirs 2 & 3	Incl. in Div. B and C	125,000.00	Complete
Laterals	Incl. in misc. exp.	1,000,000.00	Little work done
Miscellaneous	290,754.53	No estimate	
Totals	$3,354,874.73	$2,392,000.00	

the land available to farmers, during the peak years of agricultural settlement in the west. Together, these failures would permanently damage the prospects of the project as well as the company which operated it.

Footnotes

1. William Pearce to J.S. Dennis, 30 October, 1906, Pearce, ff. 9/2/7/3-21.

2. C.A. Magrath to William Pearce, 12 November, 1906, ibid.

3. William Pearce to C.A. Magrath, 12 November, 1906, ibid.

4. C.A. Magrath to William Pearce, 10 December, 1906, ibid.

5. A.M. Grace to J.D. McGregor, n.d., Canada Land, ff. 1051; cf. William Pearce to J.S. Dennis, fn. 1, above.

6. A.M. Grace to J.D. McGregor, 7 October 1907 and n.d., Canada Land, ibid.

7. Memorandum by William Pearce, 29 July, 1907, Pearce, ff. 9/2/7/3-21.

8. Ibid.

9. Philip and Kilgour, attorneys, to Secretary of the Interior, 9 March, 1908, Canada Land, ff. 1051; R.H. Campbell, Timber and Grazing Branch, to W.W. Cory, Deputy Minister of the Interior, 23 March, 1908, Cory to Minister of the Interior, 11 April, 1908, Water Resources Branch, ff. 73-67-1.

10. Samuel M. Genest to R.H. Campbell, 8 May, 1906, Water Resources Branch, ff. 83-69-1.

11. John Stewart, Commissioner of Irrigation, to Perley G. Keyes, Secretary, Department of the Interior, 16 June, 1906, Water Resources Branch, ibid.

12. W.W. Stuart, Inspector of Ranches, to Perley G. Keyes, 6 July, 1906, Water Resources Branch, ibid.

13. Camille Piché, M.P. to Frank Oliver, Minister of the Interior, 25 July, 1906, ibid.

14. Francis Percival Aylwin to W.W. Cory, 25 August, 1906, ibid.

15. John Stewart to W.W. Cory, n.d., ibid.

16. Report, William Pearce to Clifford Sifton, Minister of the Interior, 8 July, 1901, Pearce, ff. 9/2/7/3-19.

17. William Pearce to J.S. Dennis, 2 November, 1901, Pearce, ff. 9/2/7/3-14.

18. Ibid.

19. Report by James J. Child, engineer, 28 November, 1906, Water Resources Branch, ff. 83-69-1.

20. John Stewart to W.W. Cory, 15 December, 1906, ibid.

21. A.M. Grace to J.D. McGregor, 8 April, 1908, Canada Land, ff. 1051.

22. Ibid.

23. A.M. Grace to J.D. McGregor, 29 April, 1908, ibid. By August the estimate had been revised upward to $1,066,021.00 to the east end of the Bow River Syphon; A.M. Grace to W.J. Challis, 17 August, 1908, ibid.

24. A.M. Grace to J.D. McGregor, 1 May, 1908, ibid.

25. A.M. Grace to Secretary of the Interior, 1 June, 1908, Water Resources Branch, ff. 73-67-1.

26. E.F. Drake, Superintendent of Irrigation, to W.W. Cory, 15 July, 1908, ibid.

27. J.T. Hall, Secretary-Treasurer, Medicine Hat Agricultural Society, to Minister of the Interior, 25 August, 1908, ibid.

28. J.D. McGregor to Clifford Sifton, 22 July, 1908, Sifton, Vol. 185.

29. Minister of the Interior to Governor-General-in-Council, 2 September, 1908; Report of the Committee of the Privy Council, 9 September, 1908, Water Resources Branch, ff. 73-67-1.

30. Report of Frederick Haynes Newell, n.d., [ca. 1918], Canada Land, ff. 269.

31. Bow River Development, engineering reports, Vol. 2, Division "A", 1951, p. 97. GAI.

32. Report of George G. Anderson, 4 February, 1909, Southern Alberta, ff. 1.

33. The lake was named, of course, in honour of J.D. McGregor, who claimed to have discovered the valley's value as a reservoir site; Report of the Second Ordinary General Meeting, Southern Alberta Land Company Ltd., Financial Times, 18 June, 1909.

34. Report of George G. Anderson, op. cit.

35. [J.D. McGregor] to A.M. Grenfell, 16 January, 1911; agreements, Canadian Agency and Southern Alberta Land Company, 7 March, 1911 and 23 March, 1911, ff. 1050 and 1047.

36. A.M. Grenfell to J.D. McGregor, 11 January, 1911, ibid., ff. 1050.

37. Report of the Second Ordinary General Meeting, Southern Alberta Land Company Ltd., Financial Times, 18 June, 1909.

38. Agreement, Southern Alberta Land Company and Alberta Land Company, 1 April, 1911, Canada Land, ff. 82.

39. Approval of transfer of agreement from Francis Percival Aylwin to Alberta Land Company Ltd., 30 December, 1910; E.F. Drake to R.H. Campbell, 14 February, 1911, Water Resources Branch, ff. 83-69-1.

40. Agreement, Canadian Agency and Alberta Land Company Ltd. (61d), 26 May, 1911, Canada Land, ff. 488.

41. Martin, pp. 107-8.

42. Correspondence concerning Sifton Option, 5 June to 1 October, 1912, Canada Land, ff. 627. The final price awaited the determination of irrigable acreage in the tracts.

43. Hedges, pp. 202 and 308.

44. A.M. Grenfell to J.D. McGregor, 22 April, 1910, J.D. McGregor to Canadian Agency, 7 May, 1910, Canada Land, ff. 489.

45. Draft prospectus, Canadian Wheat Estates Ltd., June, 1910, ibid., ff. 490.

46. Agreement, Southern Alberta Land Company and Canadian Wheatlands, Ltd., 4 January, 1911, ibid.

47. W.H. Fairfield to J.D. McGregor, 10 January, 1911, ibid., ff. 489.

48. Expenditures, canal and intakes, 1909-1912, April, 1914, ibid., ff. 107.

49. Director's Report and statement of accounts for 1909, 6 June, 1910, ibid., ff. 1.

50. "Report on Damage to the Headworks of the Southern Alberta Land Company's Canal at Namaka, Alta.", by W.G. Bligh, n.d., Water Resources Branch, ff. 74-67-3. Accompanied a letter to the Commissioner of Irrigation, 14 October, 1912.

51. Ibid.

52. W.G. Bligh to Commissioner of Irrigation, 14 September, 1912, ibid.

53. Bligh, op. cit.

54. Lawrence E. Jones, An Edwardian Youth. (London, Eng.: Macmillan, 1956), pp. 241-245.

55. Calgary Herald, 9 September, 1912.

56. Directors' Report and Statement for 1912, 5 May, 1913, Southern Alberta, ff. 1.

57. W.G. Bligh, for example, had described Grace as "almost insulting in his demeanour" and severely criticized his engineering talents; W.G. Bligh to Commissioner of Irrigation, op. cit.

58. Samuel G. Porter to F.H. Peters, Commissioner of Irrigation, 22 August, 1913, Water Resources Branch, ff. 75-67-4.

59. Interview with W.H. Fairfield by W.L. Jacobson, 7 August, 1958, RCT-90-1, GAI.

60. "Report on Irrigation System of the Southern Alberta Land Co. Ltd.", by L.H. Taylor, 25 November, 1912; "Irrigation Scheme Report" by R.G. Kennedy, 19 December, 1912, Southern Alberta, ff. 1.

61. It did, in fact, prove to be a waste of money in a rather dramatic way. The conduit was an open concrete box, braced at the top with concrete cross bars, but in the first winter, frost action crushed it. Sam G. Porter to F.H. Peters, op. cit.

62. It was determined later that, because of another design error, the bridge's load capacity was only 25 tons, rather than the 48 ton capacity required to support the syphon when filled with water. D.W. Hays to Charles Hobhouse, Chairman, Southern Alberta Land Company, 30 January, 1918, Canada Land, ff. 269.

63. Report, R.G. Kennedy, op. cit.

64. F.H. Peters to E.F. Drake, 23 August, 1913, Water Resources Branch, ff. 74-67-4; Report of John Stewart to Secretary, Department of the Interior, 1 September, 1910; "Memorandum re inspection of the Southern Alberta Land Company's works, May 21-27, 1911", n.d., Water Resources Branch, ff. 74-67-2.

65. Expenditures, canal and intakes, 1909-1912, April, 1914; op. cit.; Report, R.G. Kennedy, op. cit.

Chapter 3 Completing the System: Hays, 1912 - 1920

With the arrival of David Walker Hays, the Southern Alberta Land Company finally acquired a person who was dedicated to the completion and operation of the project rather than to the speculative opportunities arising from it. Though Hays was technically only the project engineer, replacing Grace, and presumably subject to the overall direction of J.D. McGregor's replacement, Alick C. Newton, he seems to have become very quickly the dominant official in the company's Medicine Hat office.

Hays' immediate task was to repair and complete the irrigation network so that land could finally be sold. The completion of the engineering studies of 1912 permitted him to recommence construction in the 1913 season. Good progress was made and water was let into the system for the first time on 9 June, 1914. Because of the need to prime the canal and structures carefully, as well as the continued difficulties with poor integration of works (the foundations of one flume were eroded because of water leakage where the flume joined the canal), no water reached Lake McGregor until 12 July. The company hoped to begin regular delivery of water to the project in 1915.

Hays faced two major technical problems in accomplishing that goal, both of which had financial implications which would affect the economic prospects of the system. Firstly, all of the consulting engineers, and Hays, himself, were agreed that the extension of the canal east of the Bow River was a wasteful expense.[1] Without making the ultimate decision to write off the expenditures already made, Hays operated on the understanding that the eastern tracts would form no part of the

operating system, at least in the near future. It was unfortunate, however, that contracts had already been let for the construction of the Bow River Bridge and for the supply of the wood-stave syphons. Expenditures on these items were now clearly pointless but could not be escaped. Construction on the bridge went ahead and it was completed in 1914.

The other problem concerned the Little Bow Section of the canal, undoubtedly the most hazardous stretch of the entire route. Its location, below the system's main storage reservoir, made its unreliability exceedingly troublesome, because failure in that section could block the supply of water to the project's land. For a time the company considered the construction of a 9,000 foot long tunnel, which would by-pass the entire section. But the tunnel's construction was expected to cost $500,000.00 to $750,000.00 and the idea had to be abandoned because the expense could not be justified.[2] Hays was thrown back on the use of makeshift repairs to improve the condition of the canal, puddling a layer of clay over the sandstone and shale base and bridging the worst stretches with timber-box flumes. At best the Little Bow Section would be a continuous drain on the maintenance budget; at worst it was capable of totally disrupting the system's operation.

Concurrently with the renewed construction, the Southern Alberta Land Company finally addressed the matter of selling the project's farmland. W.R. Angell, a real estate marketer from Chicago, was engaged to advise the company. Angell thought the conditions in the west to be opportune for marketing the project.[3] He noted that

irrigated land in the Lethbridge area had risen in value from $6.00 per acre to $125.00 per acre in the previous ten years. Rural and urban populations were rising rapidly and economic activity was buoyant. He recommended that the sales campaign focus its attention on the United States, directed at the farmer-immigrants of the mid-west, who were most likely to have the $3,000-$4,000.00 needed to start an irrigated farm. The cost of selling the land was expected to amount to 20% of the selling price. Angell informed the company that it would require a patient sales program, but he was optimistic about its success.

Although the company accepted Angell's programme, it must have been distressed by the projected expense of selling the land. No previous calculation of the project's profitability had included such expenditures. The reduction in expected revenues, combined with the inexorable increases in construction expenses were producing much less encouraging projections than those which had previously buoyed up the spirits of the investors. By 1 January, 1914 the projected cost of completing the project had risen to $7,700,000.00. Even a net price of $30.00 per acre would leave revenues $1,400,000.00 short of investment in construction alone.[4] As the works neared completion, the company's financial position became increasingly insecure.

The deterioration in the company's finances had begun almost as soon as news of the intake collapse became general. For a time after the collapse a degree of optimism continued to prevail. Despite the increasing costs, R.G. Kennedy still estimated a profit of $4,260,000.00 over capital expenses.[5] The Financial Post of Canada, in reporting the

accident, placed considerable faith in the skill of J.D. McGregor to resurrect the company's fortunes.

> [There is] no doubt in the minds of practical westerners but that [the land] would be put to good use if the will of the manager, Mr. J.D. McGregor, prevailed. Mr. McGregor is a practical agriculturist. He can make farming pay; has made it pay and is personally ambitious to make it pay still better.[6]

"Practical westerners", however, did not share the Financial Post's confidence in McGregor's abilities. While they recognized the potential worth of the project, the expenditures could not be ignored. P.L. Naismith, manager of the C.P.R.'s Department of Natural Resources, wrote to Augustus Nanton, in response to a request for his views,

> I don't think there is any question but what they have a large amount of very desirable irrigable land in their Block, . . . but I think the cost per acre of putting water on the land is going to be extremely high, probably higher than any other System in the West.[7]

When William Pearce received a similar request his response was typically blunt. He considered the land between the Bow and the Belly Rivers to be admirably suited to irrigation, but much money had been wasted in developing it.

> I have no doubt the present men at the head of the company mean business but they have been victimized by the promoters.[8]

In a report to the government, which assessed the entire system, Samuel Porter, an Inspecting Engineer for the Department of the Interior, calculated that the works completed to 1 January, 1913 were worth only 60% of their cost.[9] It could not be denied that the scheme had become very expensive, and would cost even more before water reached the land.

The company could also not ignore the competition from the Canadian Pacific Railway projects to the north and south[10] of it. The C.P.R. was conducting an aggressive sales campaign to attract settlers to its projects. Not only were all the advertising and agency resources of the railway company brought to bear in the campaign, but the price structure for land was significantly lower than the Southern Alberta Land Company's anticipated price. The maximum price for irrigable land in the Western District of the Irrigation Block was only $25.00 per acre in 1906, $30.00 per acre in 1909, and $35.00 per acre in 1915.[11] Furthermore; the company provided up to $1,000 dollars in improvements in its programme of providing "ready-made farms" for its settlers.[12] By 1912, land sales in the western section were nearing completion and sales were underway, in anticipation of irrigation development, in the central and eastern districts.[13]

In the face of these unavoidable facts, loss of confidence in the company was inevitable. The value of Southern Alberta Land Company stock had risen from its par value of £1 per share in 1906 to a high of 55s. in 1911. But by the end of 1912, it dropped to 30s. and continued to decline, reaching 17s. by March, 1913, 12s. 6d by November, and 5s. 6d by May, 1914.[14] Despite the decline in its stocks, the company was able to float another issue of Debenture Stock, valued at £250,000, in order to finance further construction.[15] The issue was, of course, underwritten by the Canadian Agency, for a 3 1/2% commission. The removal of individuals involved in the stripping of capital from the project had not ended the connection of the Canadian Agency in the irrigation company's affairs.

The new source of construction capital which the debenture issue provided was vital, but only the early injection of land sales revenue could provide the necessary funds to complete, settle and operate the project. The company could ill-afford the expense of selling the land or the delays of a "patient sales campaign". Worse, as the company prepared itself to open the project up to purchasers, it was to discover [redacted]tle of its land was actually available for profitable sale.

The total extent of the irrigation project included approximately 408,248 acres, of which approximately 156,000 acres were considered to be irrigable. That acreage was rather more modest than the estimate of George A. Anderson in 1909, and was based on the results of contour surveys which had been completed in November, 1911.[16] Approximately 42,000 acres were located east of the Bow River and were, therefore, being excluded from the calculations of the company. Not only would it cost $20.03 per acre more to irrigate the eastern land than the western, but as much as 15,000 acres was held by Canadian Wheatlands, Ltd., which had paid rather less for it, $30.00 per acre, than the per/acre cost for the entire project, $39.09 per acre.[17] The decision not to proceed with the eastern tracts would save the company $850,000.00 in construction costs, but forced it to revise its agreement with its subsidiary, agreeing to extend its guarantee of Canadian Wheatlands dividends for a further four years.[18]

West of the Bow River, the company also had limitations on its available land. Its only sale to date, to Clifford Sifton, had also to be re-negotiated, because of the failure to deliver water. The sale was converted to an option-to-buy, exerciseable within seventy-five days

after the company declared itself able to supply water.[19] The purchase price of $40.00 per acre for irrigable land remained the same, and now looked like it would barely cover projected costs.

Finally, the company discovered that a tract of prime land, containing 26,150 acres of irrigable land, was closed to it until after 1926. The land was part of grazing lease no. 2422, known as the Maunsell lease. The lease had been granted on 1 August, 1905 as a twenty-one year, irrevocable lease, the same privilege granted to McGregor and Hitchcock for the Grand Forks leases.[20] With the inclusion of the lease in the Southern Alberta Land Company's project in 1908, the Department of the Interior had taken steps to cancel the lease, under provisions of the North West Irrigation Act. Their efforts were instantly opposed by the leaseholder at that time, John Cowdry, who probably went directly to the Minister of the Interior. Frank Oliver overruled his Department's understanding of its powers, and prevented the cancellation.[21] The company then attempted to negotiate the sale of the lease from E.H. Maunsell, but no agreement on price could be reached.[22] The land would, therefore, remain unavailable until the term of the lease ran out.

Therefore, of 156,000 acres of irrigable land in the project, only 69,250 acres were immediately available for sale in 1914 (see Table 4), an acreage far too small to support the accelerating costs. The financial perils did not, as yet, threaten the company's ability to complete and market the project, but the chance that its stockholders would see a return on their investment was narrowing.

TABLE 4

ESTIMATED IRRIGABLE LAND AVAILABLE FOR SALE, 1914

Total acreage of project		408,248 acres
Irrigable acreage - west of Bow River		
Western District		61,330
Central District - Maunsell lease		26,150
- other land		25,920
- east of Bow River		
Bungalow District		27,600
Suffield District		15,000
Total irrigable acreage		156,000
Less: lands east of Bow River	42,600	
Sifton Option	17,000	
Maunsell lease	26,150	
	85,750	85,750
Irrigable acreage available for sale		69,250

Early in 1914 events occurred in England which placed even the completion of the project at hazard. On 8 June, 1914 the banking firm of Chaplin, Milne, Grenfell and Company failed. It was brought down by the speculative activities of Arthur Grenfell, acting through the Canadian Agency. The Canadian Agency had attempted to reorganize the Grand Trunk Railway and the Lake Superior Corporation by obtaining stock control. Due to falling markets, part of a general depression just prior to the Great War, the Canadian Agency had been left with a huge debt to the bank, backed by much reduced assets. Grenfell departed the banking firm on 17 February, 1914. The collapse of the Canadian Agency, also on 8 June, forced Chaplin, Milne, Grenfell to suspend operations.[23]

The public collapse had been preceeded by months of uncertainty, during which the Southern Alberta Land Company lost access to funds which were held by the bank.[24] With its normal construction funds unavailable and no prospect of revenue until the construction was completed, the company searched for other sources of funding. In March, 1914, it sought the assistance of the Dominion government. The company solicited the assistance of the Bank of Montreal to put its case to the government. It claimed that its need for assistance was vital; without it the company faced receivership and the project, closure. As "the only straight irrigation company in western Canada", the company claimed its failure would affect opinion as to the feasibility of irrigation developments, disrupt immigration to the Northwest and hurt the credit of Canada.[25]

In subsequent correspondence, Denzil C. Newton, the company's attorney (as well as being the General Manager of the Canadian Agency), detailed the company's case for assistance and defined its request more precisely. Newton stated that the project was of particular public benefit because its canal ran through much public land, which could profit from the availability of water. Assistance would also constitute a direct aid to the settlers of the vicinity, who formed the bulk of the labour force on the project, and to the business community, due to the level of local spending. The project had already injected $6,131,371.00 into the economy of the country and would spend $2,836,919.00 more if the company was not forced into receivership.[26]

Newton's request for assistance took the form of a refund. The company had paid the Dominion government in full for the public land within its project in 1910. It could not, however, obtain title to the land until the company demonstrated its ability to irrigate 25% of the tract. The company wished to be relieved of that requirement so that it could obtain its title, which could then be used as security for new financing. It also wished the temporary return of its purchase money, some $397,125.00, to be used to keep construction going until new financing was obtained.[27]

The response of the Borden government was not generous. William Thomas White, Borden's Minister of Finance, was not impressed by the company's pleadings and saw no reason why the government should be expected to aid every company threatened with liquidation. He discounted the company's claim that its fortunes were of national import. He chided Williams-Taylor of the Bank of Montreal for his

unwillingness to accept the reality of "recurring depressions and failures."[28]

White's remarks were a pointed allusion, not only to the current depression, but also to the fact that the Southern Alberta Land Company was not alone in approaching the government for assistance. Most notably, the Canadian Northern Railway was occupying much of the government's attention with very much the same argument: that their survival was of overwhelming national importance. The government response was uniformly severe. Robert Borden and company were not prepared to provide an open pocket book to distressed enterprises.[29]

Members of the cabinet also had more particular objections to aiding the project. They remembered it as a beneficiary of the Liberal government's largesse and saw no reason why the Conservatives should grant it special favours,

> [especially since] we have in our possession evidence of the most glaring and dishonest manipulation in connection with the purchase of these lands, and which involves the names of certain members of the late government.[30]

Advice from officials within the Department of the Interior was rather more beneficial to the fate of the project, if not to the company. In his report to W.J. Roche, Minister of the Interior, E.F. Drake, Superintendent of Irrigation, recommended that the project be completed but that the company be allowed to fail. By his calculations it would require a selling price of $51.00 per irrigable acre to recover the investment on works. Competition from the C.P.R. project, however, prohibited so high a price. Were the land priced to compete, a loss of 75% of the invested capital would be incurred. Since assistance could

not prevent the eventual collapse of the company and takeover of the project by the government, the company should be allowed to go into receivership. The modest investment needed to complete the project could easily be recouped by the government at competitive prices. If the government chose to provide the assistance asked of it, Drake insisted that strict controls be placed on the company's operations.[31]

During the 1906 debate on the project, the Conservatives, then in opposition, had proposed public development as an alternative to the existing policy. But when the opportunity presented itself, the Conservatives proved reluctant to implement their own suggestion. As with the railways, the Government was not yet willing to concede that so drastic a measure as a takeover was required to revitalize the project.

It was persuaded, therefore, to provide assistance and, on 23 May, 1914, it agreed to refund $380,573.00, taking a first mortgage on the land as security. Unfortunately, events upset even this arrangement when, on 8 June, the same day that the Canadian Agency and Chaplin, Milne, Grenfell and Company declared bankruptcy, the Southern Alberta Land Company's 6% "A" Debenture holders voted to place the company in receivership. Unlike the other companies, the debenture holders did not intend that the Southern Alberta Land Company be liquidated. Rather, they hoped that the Receiver, Sir William Plender, would be able to arrange for financing so that they could proceed with the project.

Plender's first task was to confirm the government's willingness to implement the refund arrangement. On 31 July, 1914 the agreement was signed between the Receiver and the government, providing for the loan of $354,684.00.[32] The provisions were generally those previously

negotiated, except that the government now insisted that the Receiver promise to raise $800,000.00 from private sources as a prior condition to receiving the government loan. The government was clearly determined not only to protect its investment, through its first mortgage on the land, but also to avoid having to become directly responsible for the project later on. Either the company must prove its ability to finance itself or it could cease operations immediately.

Plender had already received authority to raise the necessary capital on 7 1/2% Receiver's notes, with priority over the Debenture stock. Before he could act on his authority, however, events once again intervened to destroy efforts to re-establish the project's finances. On 5 August, 1914, Great Britain declared war on Germany and took immediate steps to marshall its resources for the coming conflict. His Majesty's Treasury placed a ban on all exports of capital, ending any hope of financing the project from British sources. Without the $800,000.00 from Britain, necessary to release the Canadian government loan, as well as to fund the last of the construction, no further work could be pursued and the project was closed down on 11 August. Delivery of water to Lake McGregor, already delayed by structural problems along the canal, ceased entirely.

Of course, even the closure of the works did not completely end the demands of the project on the company's financial resources. If the project were to be re-activated it had to be maintained in good order throughout its period of dormancy. Hays estimated that it would cost $3,000.00 per month to provide such protection, barring extraordinary expenses.[33] In the next year Plender and Hays were faced

with just such an expense when, on 27 June, 1915, the centre section of the diversion weir collapsed, as W.G. Bligh had predicted it would three years earlier (see Photo 4). The collapse, and the damage to the riverbed which caused it, forced the company to redesign and relocate the weir. The cost of rebuilding it was $49,487.87.

In the face of such financial demands, Plender was forced again and again to beg advances on the government loan, each of which was grudgingly granted. By September, 1917 the entire loan had been exhausted in protecting the works and repairing the weir. Even then, the company had had insufficient resources to complete the new weir. A temporary timber crib connection was made between the end of the new weir and the surviving portion of the old structure, a stop-gap which would remain until 1930.

Plender's primary duty was to refinance the project, but all of his initiatives were blocked by the complexity of the project's financial troubles and the continuation of the war. Frequent applications were made to the Treasury to authorize the raising of sufficient capital to permit the selling of irrigated land, but all were refused. Plender briefly entertained hopes of selling the project to the C.P.R. or the Canadian government, but both proved illusory.

An attempt by A.J. McMillan, representing the Debenture Stockholders' Committee, to raise another loan from the Dominion government also met failure. The best that he was able to obtain from Borden and Roche was a revision of the original loan agreement, making the raising of $250,000.00 or more, but less than the $800,000.00 previously required, sufficient to permit the release of land to the company's

Photo no. 4 Collapse of weir during flood. Photo taken 24 March, 1916.

This photograph, which was taken after a coffer dam was built to drain the site for rebuilding the weir, reveals the extensive damage to the apron, the weir, and the riverbed. The weir structure dropped into a hole scoured out of the riverbed beneath the apron by the surging river. Canada, Dept. of the Interior, Water Resources Branch Papers, R.G. 89, vol. 75, file 67-5. PAC.

control.[34] That concession at least eased the limitations to opening the project, if funds could be obtained at all.

Apart from the war, the future of the project was at hazard primarily because of the complicated intermingling of affairs of the three companies involved in it. The Southern Alberta Land Company was, of course, responsible for its construction and the company's failure threatened the project's survival. But the other two companies, Canadian Wheatlands, Ltd. and the Alberta Land Company, Ltd., both dependent on the success of the project for their own success, had interests which seriously hampered attempts to reorganize it.

Canadian Wheatlands, Ltd., which had placed its hopes on obtaining short-term profits from dryland farming before it sold off its land as "improved" irrigated farms, had met with indifferent success. The weather during the period of its farming operations had provided ample proof of the value of irrigation in the area. Poor rainfall had produced only modest crops, which had brought insufficient returns to justify the venture. Furthermore, the decision of the Southern Alberta Land Company to delay delivery of water east of the Bow River dashed all hopes of turning the ultimate profit from the sale of irrigated farms. Only the extension of dividend guarantees from the Southern Alberta Land Company kept Canadian Wheatlands out of obvious financial difficulties. When the Southern Alberta Land Company entered receivership, Canadian Wheatlands quickly followed.[35]

The fate of the Alberta Land Company was also decided by the Southern Alberta Land Company failure. Its prospects were dependent on the latter company's ability to deliver water and the closure of the

works ended any chance of land sales in the Alberta Land Company tract as well. It, too, entered receivership, under Alexander Cameron of Calgary, on 10 August, 1915.[36]

In any revival of the irrigation project, the conflicting interests of the three companies would have to be sorted out. The Southern Alberta Land Company, as the operating company, had obligations to the other two which hampered its ability to develop the project profitably, if at all. Although its obligation to guarantee the dividends of Canadian Wheatlands technically ran out in 1917, the extension could serve as a precedent to force a continuation of the guarantee until water was delivered. Hays was very reluctant to deliver water across the Bow River, to land so distant from the source and of marginal quality. Either the delivery of water, or the continued guarantee would be a serious drain on the company's financial resources. The deal with the Alberta Land Company had also proved unproductive. R.G. Kennedy estimated that it would cost $40.00 per acre to irrigate 40,000 acres for the Alberta Land Company, The agreement had set the price at $10.00 per acre, which would produce a loss of $1,200,000.00.[37]

By 1916, Plender and others had become convinced that the tangled web of the project's finances could only be unraveled by an amalgamation of the three companies. Details of amalgamation were worked out and, from 1 July, 1917, all assets and liabilities became vested in a new company, The Canada Land and Irrigation Company, Ltd.

The amalgamation did much to improve the condition of the project. Firstly, and most importantly, it brought all the affairs of the

project under the control of one company. It would permit the new company to develop the project in the most efficient manner. Hays had long recognized that it was most logical to open up the project in stages, beginning with the most westerly land, so that maintenance costs could be kept to a minimum. Relieved of the requirement to transport water immediately to the most extreme northerly and easterly parts of the tract, Hays would not have to provide for the care of the entire length of the main canal until the occupation of land justified it.

The amalgamation was also marked by a renewed, and this time successful, bid for new financing. The allocation of shares and debenture stock among the investors provided for a call of four shillings on each common share, which would raise £205,000 ($1,025,000.00). Of this, the British Treasury permitted an immediate call of one shilling, providing sufficient capital to reactivate the project. The new company was also empowered to raise another £200,000 in priority to the existing Debenture stock. The arrangements for transferring capital holdings from the old companies to the new also reduced the project's capital indebtedness by converting one half of its 5% Debentures and all of its 6% Debentures to common shares. Total share capital was raised to £2,525,000 ($12,625,000.00) from £2,440,000 ($12,200,000.00) held in the three companies forming it.[38]

Needless to say, the Canada Land and Irrigation Company also inherited the accumulated liabilities of the old companies. Of primary concern were debts owed to the Dominion government and the Hudson's Bay Company. The first was, of course, the loan arranged by the Southern

Alberta Land Company in 1914. The second was a final legacy of the Canadian Agency's involvement in the project's affairs. At the time of the general collapse in 1914, the Southern Alberta Land Company had paid all but $104,979.50 on its agreement to purchase Hudson's Bay Company land from the Canadian Agency. The Alberta Land Company had completed its payments of $444,330.30. The Canadian Agency, however, still owed the Hudson's Bay Company $256,344.76 at the time of its liquidation. In order to take possession of the land which its predecessors had already paid for, the Canada Land and Irrigation Company was compelled to fulfill the Canadian Agency's debt. By agreement they were not obliged to start payments until 1922, but the debt would build interest at 5% during the interim.[39] Apart from the two major debts, the new project also had several minor debts, including a number of disputed construction contracts amounting to $91,714.91 and a bill for services from the Receiver.[40]

Hays expected to be able to deliver water to farmland in the 1919 season. Construction began immediately after the amalgamation and land sales began in April, 1918 in anticipation of the long-delayed event. The combined company now controlled 531,853 acres of land, of which 192,000 were irrigable. Excluding the eastern tracts, the Maunsell lease and the Sifton Option, but including the tract of the Alberta Land Company (now called the Alberta District), 109,000 acres of irrigable land were immediately available for sale.

The irrigation system, however, proved to be as cranky in operation as its eccentric construction had promised. With careful priming and a number of hasty repairs, water started flowing into Lake McGregor in

August, 1918, but no water flowed out of the lake until September, 1919 because of accidents which stopped the inward flow, and the need to remove a ridge of land in Snake Valley to improve the flow of water to the lake's outlet. Water reached the treacherous sandstone portion of the Little Bow Section on 23 October, 1919 and promptly washed out the canal, requiring 50,000 cubic yards of fill to rebuild it. Water finally reached the land on 21 May, 1920.

The prolonged delay in delivering water, and a consequently poor rate of land sales, left the company's London officers dissatisfied with D.W. Hays' management of the project. Hays had been the senior officer at the project's Medicine Hat offices since McGregor's departure in 1912 and had been named General Manager of the new company after the amalgamation. He had arrived at a time when the project was in disarray and had been responsible for its reconstruction, under increasingly difficult financial conditions, until 1914. He had then, with the Receiver, ferried it intact through the war years and had finally brought it to the stage where it was delivering water, amidst delays which were entirely due to problems inherited from McGregor's shoddy regime. Having attained his goal to get water onto the land and faced with the disaffection of his superiors, Hays resigned in September, 1920.

He left a project which was a hodge-podge: with the diversion weir still uncompleted; with the crumbling remains of the concrete flume laid back against the new slopes of the Big Cut, with temporary canals around flumes which had failed, and temporary flumes over stretches of canal which had failed; with an unused bridge, empty

syphon supports and a canal grown back to grass east of the Bow River, which was unlikely ever to see water flowing between its banks. But the irrigation system was finally delivering water to farmland, fourteen years after the first proposals, eleven years after the beginning of construction. The project was operating, but the delays would have a telling effect on the performance of the project, due both to the money expended and to the unfortunate timing forced on the company for opening the project to settlement.

Footnotes

1. See, for example, D.W. Hays to Southern Alberta Land Company, London, 29 July, 1913, Canada Land, ff. 19.

2. Reports by R.G. Kennedy, 22 May and 9 November, 1913, Canada Land, ff. 26; Samuel G. Porter to F.H. Peters, Commissioner of Irrigation, 22 November, 1913, Water Resources Branch, ff. 75-67-4.

3. Report by W.R. Angell, 21 October, 1913, Canada Land, ff. 40.

4. Investment diagram, [1 January, 1914], Canada Land, ff. 107.

5. "Irrigation Scheme Report" by R.G. Kennedy, 19 December, 1912, op. cit.

6. Financial Post of Canada, 1 February, 1913.

7. P.L. Naismith to A.M. Nanton, 1 April, 1913; in Canadian Pacific Railway, Department of Natural Resources Papers, ff. 19. GAI

8. William Pearce to G.V. Ryley, Land Commissioner, Grand Trunk Pacific Railway, 28 November, 1913, Pearce, ff. 9/2/7/3-21.

9. "A Report on the Southern Alberta Land Company" by Samuel G. Porter, 10 June, 1914, Water Resources Branch, ff. 191-2005-1.

10. The Alberta Railway and Irrigation Company was acquired by the C.P.R. in 1912.

11. Hedges, pp. 184, 201-202, 308.

12. Ibid., p. 226.

13. Ibid., p. 234 et seq.

14. Financial Post of Canada, 1 February, 1913 and 13 June, 1914; The Financial News, 14 March, 1913; William Wainwright, Vice-President, Grand Trunk Pacific Railway, to G.V. Ryley, 10 November, 1913, Pearce, ff. 9/2/7/3-21.

15. Prospectus for £250,000, 6% Debenture 'A' Stock, April, 1913, Canada Land, ff. 21.

16. Report by George G. Anderson, op. cit.; J.D. McGregor to Secretary, Department of the Interior, 8 November, 1911, Water Resources Branch, ff. 74-67-2.

17. D.W. Hays to Southern Alberta Land Company, London, Canada Land, ff. 21.

18. Report of the second ordinary general meeting, Canadian Wheatlands, Ltd., 3 June, 1913, The Financial Times, 4 June, 1913.

19. Correspondence re Sifton Option, March-November, 1913, Canada Land, ff. 83, 627.

20. Secretary, Department of the Interior, to Galway Horse and Cattle Company, 10 March, 1906, Canada Land, ff. 1052. The lease passed through several hands during its existence, but was referred to in Company files as the Maunsell lease.

21. Correspondence re ranching lease no. 2422, July-November, 1909, Timber and Grazing Branch, ff. 1245-423589-1.

22. J.R. Sutherland, Suppy and Sutherland Investment, Ltd., Calgary, to J.D. McGregor, 2 May, 1912; Alick C. Newton, Attorney, to Canadian Agency, 27 May, 1913, Canada Land, ff. 1052, 19.

23. The Times, The Ottawa Morning Citizen, The Ottawa Evening Journal, 8 June, 1914; The Financial Post of Canada, 13 June, 1913.

24. Southern Alberta Land Company, London to Southern Alberta Land Company, Medicine Hat, 3 January, 1914, Canada Land, ff. 68.

25. T. Williams-Taylor, Bank of Montreal, to Robert Laird Borden, 23 March, 1914, Borden, ff. 167-RLB49-1.

26. Denzil C. Newton, Attorney, to Robert Laird Borden, 25 March, 1914, ibid.

27. Denzil C. Newton to Robert Laird Borden, 27 April, 1914, ibid.

28. William Thomas White to Robert Laird Borden, 25 March, 1914, ibid.

29. G.R. Stevens, History of the Canadian National Railways. (New York: Macmillan, 1973), pp. 273-274.

30. Robert Rogers, Minister of Public Works, to Robert Laird Borden, 18 September, 1914, Borden, ff. 167-RLB49-1. Although this letter was written after the government had committed itself to assist the company, it illustrates an attitude which was expressed, less succinctly, by others during the negotiations.

31. E.F. Drake to W.J. Roche, 23 April, 1914, Water Resources Branch, ff. 191-2005-1.

32. Agreement, Southern Alberta Land Company, Sir William Plender, Metropolitan Trust Company, Ltd. (representing the 6% Debenture holders) and George Halsey Perley (representing the Government of Canada), 31 July, 1914, Canada Land, ff. 70.

33. D.W. Hays to Sir William Plender, 9 August, 1914, Canada Land, ff. 174.

34. Correspondence re revision of loan agreement, June-July, 1916, Canada Land, ibid.; Borden, ff. 168-RLB49-2.

35. Correspondence re Canadian Wheatlands, 1913-1917, Canada Land, ff. 40 and 195.

36. Appointment of Receiver, 10 August, 1915, Water Resources Branch, ff. 84-69-3.

37. Report by R.G. Kennedy, 1914, Canada Land, ff. 129.

38. Report by Sir William Plender as Receiver and Manager, Southern Alberta Land Company, 1 June, 1917, Canada Land, ff. 202.

39. Agreement, Hudson's Bay Company, Canadian Agency, Southern Alberta Land Company, Alberta Land Company, 31 May, 1917, Canada Land, ff. 1047.

40. Report by Sir William Plender . . ., op, cit.

Chapter 4 The Project in Operation, 1918 - 1928

With the beginning of land sales in 1918 and the delivery of water to the most westerly districts in 1920, the Bow River Irrigation Project (as it came to be known) attained, at last, the status of an operating system. The project's success or failure would now depend primarily on the company's ability to sell sufficient land, at a sufficient price, to provide adequate funds for the maintenance of the works and the progressive extension of the irrigable area. But since the project's health depended very much on the economic fortunes of the company, it had also to be able to produce, eventually, some reward for the massive investment which had already been made and which would continue until the project was fully occupied. Ultimately, both the project and the company depended on the capacity of the farmers who settled on the project becoming financially secure in their own agricultural endeavours, for it was they who would generate whatever returns the company would obtain. The financial condition of the company and economic forces beyond the control of either the company or the farmers, were to have an inordinate effect on the project in its first decade of operation.

It has been established that the Canada Land and Irrigation Company was possessed of an irrigation project which had been heavily overloaded with capital charges. At the time of the amalgamation in 1917, the balance sheet stood at £1,823,090 15 0 ($9,115,450.00), of which £1,445,728 11 10 ($7,228,640.00) had been invested in land and works.[1] In that year the company produced a tentative forecast of its

assets and liabilities, projected on a complete disposal of land by 1935.[2] By then the balance sheet was expected to stand at $18,817,000.00. The company operated on the assumption that it would be able to sell its land steadily throughout the period[3] at prices sufficient to produce a modest profit of $933,769.00, an amount which would pay only 7% of the value of the company's common shares.[4] Even that was an optimistic forecast, since it assumed that nothing would prevent the company from setting its land prices strictly according to the economics of cost recovery, that the land would sell at those prices, and that the purchasers would be able to fulfill their obligations.

The price which the company set for its land was $55.00 per acre for irrigable land and $12.50 per acre for dry land within the irrigation area, or a balanced price of $27.60 per acre. The purchase contracts called for a 20% down payment and annual payments over five years for dry land (which could be extended to seven years, reducing the payment, if certain cultivation requirements were met) and twelve years for irrigable land.[5] Until water was delivered all land was sold under dry land contracts, which would be revised once water became available; all prior payments were credited to the purchase price. Payment for water was set at a flat rate of $1.50 per acre. Title to irrigable land carried with it shares in a canal company, which would gain control of the system once 75% of the land had been sold and paid for.[6]

The price for irrigable land was even higher than that estimated by E.F. Drake in 1914 (see above, p. 96). Not only was the price significantly higher than that being charged by the Canadian Pacific

Railway, $45.00 per acre in the Eastern Irrigation District, the railway company was offering other inducements as well. The C.P.R. offered a twenty year contract and improvement loans. The incentive to buy irrigable land from the Canada Land and Irrigation Company rather than the Canadian Pacific Railway Company was poor strictly from a financial standpoint.[7]

Furthermore, the Bow River Project had other, less direct, but nevertheless vital, disadvantages, compared with its competitor. All of the C.P.R. land was accessible to the railway's main line. Only the Canada Land and Irrigation Company's Suffield District shared this advantage, but its other shortcomings, previously discussed, made that advantage of little value. The remainder of the project was well to the west of the C.P.R. main line and the best land was isolated from both the main line and the Crowsnest Branch by rivers.

The difficulty of isolation had not been entirely ignored by the promoters and developers, but their proposals had been in keeping with the rest of their activities concerning the project. In the flamboyant days of ambitious scheming, McGregor had spoken of building an electric railway line into the project from Suffield. There had also been talk of a tourist tram line to Lake McGregor from Lethbridge, as part of a scheme to turn the lake into a water playground.[8] Nothing, however, had been done to provide a transportation link until after [redacted]regor's departure, when the C.P.R. committed itself to build the Suffield-Blackie Branch through the project (see Map 6). Even that was an inconvenient link, because all products destined for local markets or the west coast had to exit the project eastwards through Suffield and

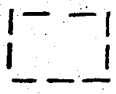
MAP 6

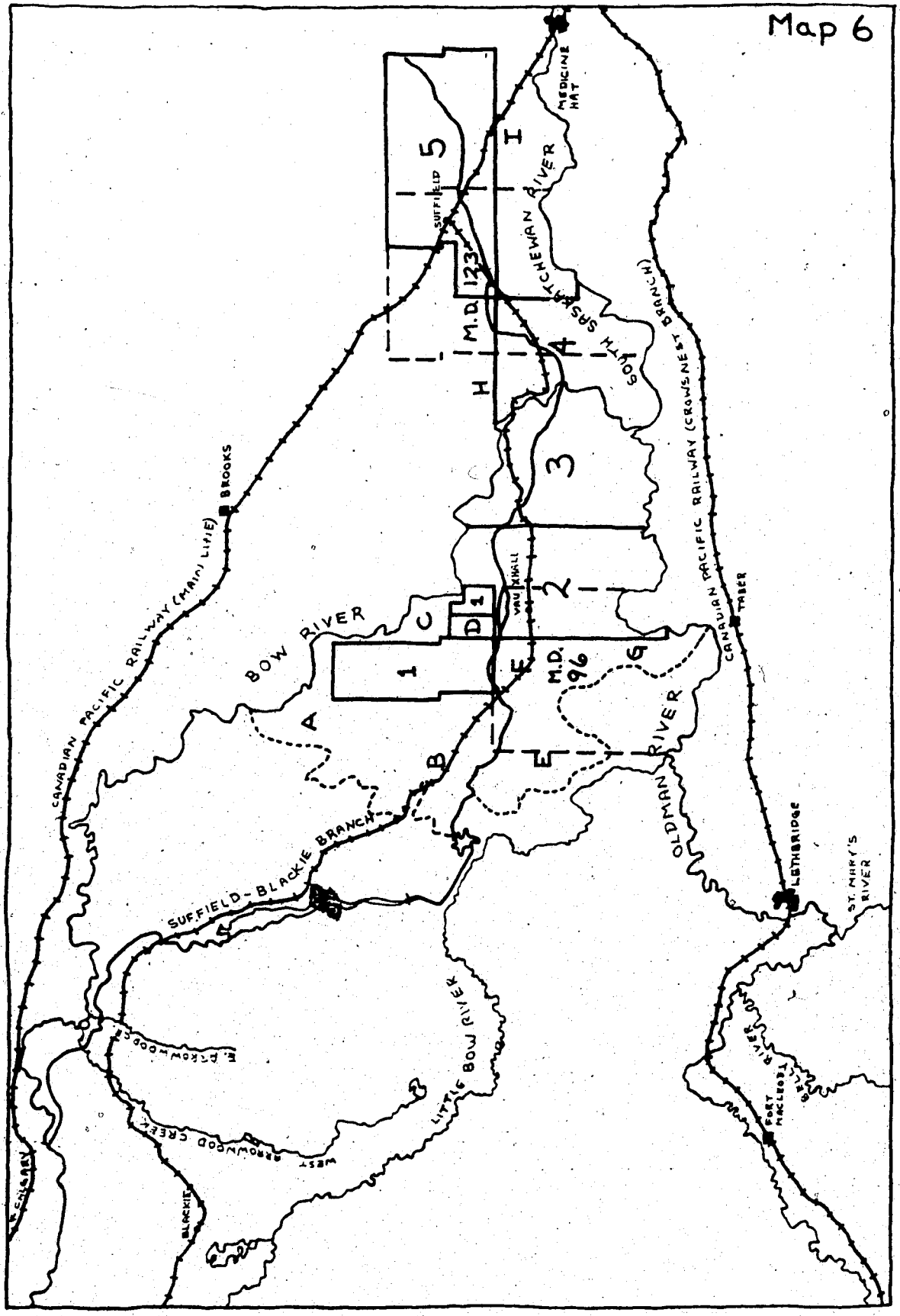
Company land and irrigation districts, 1918-1928

1. Alberta District
2. Western District
3. Central District
4. Bungalow District
5. Suffield District

A. Eyremore District
B. Lomond-Enchant District
C. River Bow District
D. New West District
E. Sundial District
F. Retlaw District
G. Sundial Extension
H. Ronalane-Cecil District
I. Redcliff District

Municipal District boundaries




Map 6
MEDICINE HAT
SUFFIELD
M.D. 123
SOUTH SASKATCHEWAN RIVER
SOUTH FORK
CANADIAN PACIFIC RAILWAY (CROWSNEST BRANCH)
BROOKS
CANADIAN PACIFIC RAILWAY (MAIN LINE)
VAUXHALL
BOW RIVER
M.D. 96
TABER
OLDMAN RIVER
SUFFIELD-BLACKIE BRANCH
LETHBRIDGE
ST. MARY'S RIVER
LITTLE BOW RIVER
EAST GROUNDWOOD CREEK
WEST GROUNDWOOD CREEK
BLACKIE
FORT MACLEOD
OLDMAN RIVER
A
B
C
D
E
F
G
H
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2
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then backtrack westward along either the C.P.R. mainline or the Crowsnest Branch, greatly increasing freight costs.[9]

The combination of the project's inherent disadvantages with the onset of dry years, poor post-war economic conditions and the delays in delivering water produced a poor record of land sales. When the commencement of sales was announced in 1917, the company received applications for 24,915.41 acres of land (see Table 5).[10] After an early round of encouraging sales, the figures dropped off, until months, then years, passed by without any sales. No more than seventy sales were made to the end of 1923, averaging 544 acres per sale. Hays blamed the delays in delivering water for creating an atmosphere of "wait and see". Though the destruction of dry land crops by the hot, dry summers advertised the virtues of irrigation, few were willing to buy land in anticipation of its arrival. As already noted, the company tended, if not to blame, at least to hold Hays responsible for both the delivery delays and the sales slump.

In one sense, Hays probably was responsible. Although the company announced in 1917 that land sales would begin the next year, no sales campaign was implemented. The Land Department, which became responsible for handling the company's sales, was not set up until after December, 1918 and no published literature was available to advertise the project until after July, 1919. Seemingly, the company depended for its earliest sales on enquiries received as a result of its initial announcement. No doubt the financial difficulties of the company influenced the reluctant establishment of the sales organization, with its attendant expenses, but if Hays or the company's directors thought

TABLE 5

AMOUNT AND VALUE OF LAND SALES, 1918-1923

YEAR	MO	APPLICATIONS	ACREAGE SALES	ACREAGE CUMULATIVE	VALUE OF CONTRACTS MONTHLY	VALUE OF CONTRACTS CUMULATIVE	1st INSTALLMENT MONTHLY	1st INSTALLMENT CUMULATIVE
1917	De	16,051.77						
1918	Ja							
	Fe							
	Mr	24,915.51						
	Ap	17,485.51	6,142.62	6,142.62	145,600.00	145,600.00	29,648.00	29,648.00
	My		(2,931.908)	9,074.528	(66,970.00)	212,570.00	(13,394.00)	43,042.00
	Jn		(11,108.58)	20,183.108	(252,210.00)	464,780.00	(50,482.00)	93,524.00
	Jy		(1,060.83)	(21,243.938)	(27,573.95)		(16,487.00)	
	Ag							
	Sp		276.60	21,520.538		492,353.95		110,011.00
	Oc		0.00					
	No		160.00	21,680.538				
	De		(40.00)	21,720.00				
1919	Ja							
	Fe							
	Mr							
	Ap		(1,280.793)		(77,323.95)		(22,687.00)	
	My							
	Jn			(23,000.793)		569,676.90		132,678.90
	Jy		0.00					
	Ag		80.00	(23,080.793)	(4,184.99)	(573,861.89)		
	Sp		1,121.00	(24,201.793)	58,900.00	(632,761.89)	(39,240.35)	
	Oc		1,740.36	25,942.153	103,315.36	736,077.25		171,919.25
	No		160.00	(26,102.153)	8,900.00		(22,662.00)	
	De		666.33	26,768.483	(28,623.00)	773,600.25		194,581.25
1920	Ja		379.40	(27,147.883)	16,660.00	(790,200.25)	3,660.00	(198,241.25)
	Fe		68.77	(27,216.653)	1,400.00	(791,600.25)	280.00	(198,801.25)
	Mr		0.00					

TABLE 5 - Continued

YEAR	MO	APPLICATIONS	ACREAGE SALES	CUMULATIVE	VALUE OF CONTRACTS MONTHLY	CUMULATIVE	1st INSTALLMENT MONTHLY	CUMULATIVE
1920	Ap		320.00	(27,536.653)	13,500.00	(805,100.25)		
	My		160.00	(27,696.653)	10,800.00	(815.900.25)		
	Jn		750.70	(28,446.353)	52,900.00	(868,800.25)	(36,372.98)*	
	Jy		340.00	(28,786.353)	20,200.00	946,690.91*		234,894.23*
	Ag		240.00	29,026.353	17,100.00	(963,790.91)	(3,420.00)	(238,314.23)
	Sp		2,920.82	(31,947.173)	211,400.00	1,175,190.91	(42,280.00)	280,594.23
	Oc		1,000.00	(32,947.173)	63,100.00	(1,238,290.91)		
	No		643.21	(33,590.383)	41,900.00	(1,280,190.91)	(60,472.67)	
	De		(79.317)	33,670.00	(5,800.00)	(1,285,990.91)		
1921			599.08	34,269.00	38,943.20	(1,324,934.15)		341,066.90
1922			0.00					
1923			0.00					

Figures in brackets ( ) are derived by author.

*A discrepancy of $37,490.66 between my calculated contract values and the company's July statement may be due to the conversion of dry-land contracts to irrigable land contracts, which could also explain the high first installment receipts between April and July.

that the project would sell itself, they were sadly deluded. The absence of a systematic sales programme probably contributed to the company's failure to maintain sales after the first few months.

As a postscript to the company's depressing sales effort, Clifford Sifton was notified in July, 1920 that, water being now available, he had seventy-five days to exercise his option. Sifton declined. The Sifton Option went into the general pot of unsold land.[11]

Some land was sold, however, and the project began to be farmed. The sale of land also began to generate some revenue, mainly down-payments. But even successful land sales did not ensure a continuous flow of funds because the purchasers very quickly discovered that conditions were not propitious for starting farms.

Firstly, after several years during the war when rainfall had been adequate to support excellent dry land wheat crops, the southeastern climate had returned to its more normal, dry condition (see Table 6).[12] From the first year of sales, the company reported the consequences. Crops looked poor by June of 1918; by September company officials had declared a "practical crop failure".[13] Subsequent years produced similar results.

Farmers who attempted to crop the project's dry land quickly showed signs of financial distress. Many of them resorted to the government for seed grain relief. For the company, their distress was reflected in a sharp decline in contract payments. In 1919, of forty-four second installments due, only five were paid in full, only fifteen paid the interest.[14] By 1922, there was a balance due on dry land contracts of $182,464.01, and no prospect of collection.[15]

TABLE 6

PRECIPITATION AT RONALANE, ALTA. (Tp.13-12 W4), 1915-1922

Year	Total for Year	Total for May-August
1915	13.93 in.	9.85 in.
1916	18.32	12.57
1917	9.27	3.63
1918	7.01	4.16
1919	8.73	3.65
1920	9.99	4.98
1921	13.51	4.77
1922	12.45	4.09

Virtually no crops were being grown. Frederick Willord Hanna, who replaced Hays as General Manager of the company on 22 April, 1921, recommended that all existing contracts be liquidated by a cash settlement, and that any new dry land sales have higher initial payments, since that was usually the only one received.[16] The company settled on a reduced price of $10.00 per acre within the irrigated districts and $5.00 per acre in the Suffield and Bungalow Districts, but they got no sales. The exodus from east-central dry lands had already begun.[17] The Provincial Survey Board inquiry recommended the wholesale relocation of stricken farmers.[18] No one could be expected to buy once failure had been officially acknowledged.

On the irrigated land, once water had arrived, circumstances were less dreary. In the first year of deliveries there were twenty water users, all but four of whom were able to pay the water rental charges. Crop production, compared to the dry land in the project, was encouraging. Of 4,240 acres irrigated in that first season, 3,766 acres were cropped to wheat, and yielded 25 bushels per acre; there were also 300 acres of alfalfa, 45 acres each of grass pasture and barley, 69 acres of potatoes, and 15 acres of flax.[19] By 1922, wheat yields of 30 bushels per acre were being reported.[20]

Yet despite the better performance of the irrigated farms, the company suffered from arrears of payments on irrigated land contracts as well, amounting to $49,469.30 in June, 1922.[21] It is difficult to determine precisely the financial condition of the irrigating farmers. Certain points can, however, be made. Throughout the period under study in this chapter, the irrigated land was cropped primarily to

wheat; 88% in 1920; averaging 50% in subsequent years. Wheat was, therefore, the prime source of revenue for the project's irrigators. The agricultural rationale for irrigating land included the increased productivity of traditional crops and the productivity of the project in wheat was somewhat higher than the average for the district or for the west, generally.[22] But dependence on wheat also left the project's farmers vulnerable to the gyrations of the wheat market. With his higher capital and operating costs, an irrigator had a higher threshold price than his dryland competitor. Collapsing prices would hurt him earlier and harder.

The disappearance of the Wheat Board after the 1920 crop year produced an immediate drop in wheat prices, from $2.51 per bushel to $1.65 per bushel in 1921.[23] The decline showed up in the per acre value of crops produced in the project (see Table 7).[24] The decline in crop values was 23% between 1920 and 1921, somewhat smaller than the wheat price drop of 35%. But it must be remembered that the first year's crop had been more heavily oriented toward wheat production than became normal in subsequent years. It was also the first year of operating both the system and farms under the new techniques, and crop values were probably artificially low due to the almost inevitable inefficiency of new operations. A natural improvement in crop values could be expected at stable prices, as both farmers and the company gained experience in operating irrigated farms and the delivery system. The decline in crop values was, therefore, a significant indication of the effect of price levels on the project's fortunes.

TABLE 7

CROP PRODUCTION AND VALUE, VAUXHALL DISTRICT, 1920-1950

YEAR	# OF FARMS	WATER USERS	IRRIGABLE LAND (ac.)	IRRIGATED LAND (ac.)	CROP AREA (ac.)	CROP VALUE ($)	VALUE/ ACRE	VALUE OF FARM IMPROVEMENTS ($)
1920	30	21	6,575.79	4,240	3,800.49	117,304.10	30.86	132,749.00
1921	70	64	11,456.91	9,400	7,618.39	171,784.26	23.80	278,423.00
1922	71		11,534.24	9,809	9,101.86	222,543.85	27.18	347,677.00
1923	71		11,534.19	11,249	9,894.98	196,916.98	20.41	439,355.00
1924	69		11,082.01		10,205.80	213,974.50	21.40	449,515.00
1925	68	81*	10,474.50	10,173	10,294.40	304,920.45	29.77	446,518.00
1926	68		10,618.80	10,389	10,466.20	301,393.10	29.01	475,571.00
1927	148	183	19,600.20	16,657	16,657.20	492,118.70	29.56	578,160.00
1928	181	232	25,035.50	15,685	21,032.20	334,061.82	15.88	701,927.00
1929	201	239	27,287.80	25,680	24,630.30	517,076.50	20.99	822,238.00
1930	230	296	30,884.20	29,803	26,661.57	296,836.40	11.18	664,982.50
1931	251	296	31,626.20	29,803	26,015.30	236,907.15	9.10	700,127.50
1932	251	267#	31,964.90	24,254	23,622.00	122,866.30	5.20	666,264.50
1933	240	228	31,350.90	20,749	21,781.36	136,991.36	6.29	661,447.50
1934	232	243	30,488.40	20,993	20,993.50	207,231.50	9.82	690,247.00
1935	240	253	30,642.10	23,191	22,694.00	255,992.60	11.28	716,821.00
1936	262	264	34,856.60	29,464	24,963.10	334,237.98	13.37	756,997.00
1937	288	317	37,472.20	32,567	28,006.60	518,475.49	18.52	845,844.00
1938	308	339	39,445.66	36,115	31,094.10	414,791.15	13.34	923,956.00
1939	313	348	39,835.44	38,009	32,189.50	355,562.79	11.04	1,029,813.50
1940	320	358	41,917.00	39,218	33,205.00	318,024.25	9.57	1,111,932.00
1941	342	363	42,267.20	37,255	29,893.10	302,088.59	10.10	1,288,332.00
1942	337	363	43,780.70	39,468	32,337.50	500,132.21	15.47	1,299,743.00
1943	342	367	43,701.00	37,284	29,693.00	483,695.00	16.29	1,430,300.00
1944	338	372	44,632.00	39,141	30,945.50	617,140.07	19.94	1,520,280.00
1945	340		45,373.00		31,299.00	652,069.78	20.83	1,452,878.00

TABLE 7 - Continued

YEAR	# OF FARMS	WATER USERS	IRRIGABLE LAND (ac.)	IRRIGATED	CROP AREA (ac.)	CROP VALUE ($)	VALUE/ ACRE	VALUE OF FARM IMPROVEMENTS ($)
1946	350		44,624.00		33,902.50	798,455.34	23.55	1,512,075.00
1947	358		44,950.00		34,346.00	698,066.45	20.27	1,621,515.00
1948	371		45,593.90		34,608.00	1,102,052.73	31.84	1,916,054.00
1949	386		48,758.90		37,431.40	1,130,654.00	31.97	2,213,108.00
1950	378		49,654.00		36,508.80	1,217,473.39	35.65	2,713,629.00

*Water users from 1924 include the New West Irrigation District.
#Water users and irrigated acreage from 1932 approximate.

It must also be remembered that many of the farmers had purchased their farms well before the arrival of water and had attempted to grow crops for one or two seasons under dryland conditions. The total crop failures in 1918 and 1919 left those farmers in financial trouble well before their first irrigated crop was harvested. The delays in delivering water also lost them the last years of Wheat Board prices.

In examining the difficult problem of determining the economic status of the project's farmers, it is necessary to consider the calibre of those farmers. It is clear from the company's land sales records,[25] that few of the purchasers had any experience in operating irrigated farms. The general level of farming experience among them was probably no greater than the average among dry land settlers. The company seems to have made no special effort to attract the competent or dissuade the incompetent. J.D. Fairless, the company's accountant, recalled that J.W. McLane, the land agent, was motivated only to make sales. As a result, "he used to get the darnedest bunch of lemons out there on farms."[26] Fairless, who was greatly distrustful of McLane, in general, was probably overly harsh, since there was little turnover of farmers until the Depression, but the possible impact of unskillful farming and irrigation practices on the project's performance cannot be discounted.

The addition of higher land payments and of water charges, at the same time that crop receipts were falling, served to stretch the finances of the farmers beyond their ability to cover all obligations. Priorities demanded that they pay their water charges, or face a water cut-off. But the poor sales record and the urgent need of the company to retain the possibility of payment and to avoid increases in its tax

burden made repossession an impractical option and removed the only threat that might have forced more compliance over land payments. The project, therefore, fell far short of its expected capacity to produce revenue. Little land was sold after 1920, so little first installment revenue was generated. Dry land sales were virtually written off, no payments having been made on most of them since the first installment. Irrigated land was returning, at best, only revenue from water deliveries and interest on account, which was barely able to cover the cost of delivery and day-to-day maintenance. In an attempt to encourage payments, the company was forced to convert its twelve-year irrigable land contracts into nineteen year contracts, which reduced the annual payment, making them somewhat more competitive with the C.P.R. Even so, payments were not forthcoming. Under the old contracts $99,138.44 was due on 1 March, 1923. Under the new contracts, the obligation was reduced to $54,187.21, but only $8,918.35 was collected. Of $391,918.35 of expected revenue to 1924, only $13,165.97 had been received, excluding first installment receipts.[27]

Such poor revenues could not possibly finance the major repairs and expansion which were still required along the system, for example, the long-delayed completion of the diversion weir. Expenditures outstripped revenues in every year under study, even though the poor performance of the project forced the company to curtail its expenditures severely. The project continued to survive only by drawing funds from its British investors. Two calls of one shilling in 1919 and 1920 used up the capital resources which had been built into the amalgamation. In 1918, the company also raised £445,000 ($2,225,000.00) by an issue of 6%

Debenture Stock. But the expenses attendant upon the delivery of water in 1920 so reduced the available capital that G.F. Herbert, Assistant Manager, predicted that requirements for 1921 would leave almost nothing for 1922.[28] Therefore, the company was forced to raise another £300,000 ($1,305,000.00) by issuing 7% Prior Lien Debenture Stock, a move which had been provided for in the previous Debenture issue. The issue sold well, although it raised less working capital than the figures indicate. Part of the issue ($200,000.00) was taken up by the Hudson's Bay Company, to clear the company's debt for the H.B.C. land in the project. Furthermore, the international money market exhibited a sharp downturn in the value of the pound sterling following the war, which reduced the benefit being gained from the transfer of funds to Canada. When the 6% Debentures were issued, sterling had stood at $5.00 Canadian. By 1920, it was worth only $4.00, recovering to $4.35 and $4.40 in 1921 and 1922 (see Appendix). The company attempted to reduce its losses from this source by delaying some of its payment obligations. Repayment of the Canadian government loan was deferred to 1930.[29] But even operating the project at austerity levels required $250,000.00 per year, including $80,000.00 per year in taxes.

Taxation placed a totally unexpected pressure on the project's finances. Until 1912 all of the land within the project boundaries had been part of six Local Improvement Districts, all of which had been almost barren of population. In that year, two of the L.I.D.'s had been upgraded to rural municipalities, in response to increases in population which created pressures for services, such as roads, bridges, etc., though primarily in those areas outside the project boundaries,

where the district populations were concentrated.[30] With increased responsibility came increased taxation powers, notably the power to tax on the basis of land values rather than flat rates. They became R.M. McLean No. 96, which included a portion of the company's Western District, and R.M. Sunny South No. 123, which contained parts of both the Bungalow and Suffield Districts (see Map 6). Both proceeded to set values on the land as farm land and to assess taxes accordingly. Nor were they alone in taxing project land. A few School Districts were established as the settlement of the project proceeded and, ironically, the provincial government was taxing all of the company's undeveloped property under the Wild Land Tax Act. Total taxes amounted to $50,000.00-$80,000.00 per year by the 1920's and the company, beset with so many other calls on its inadequate resources, fell rapidly into arrears.

It was obvious to the company's London investors that the tax bill could not be borne. It was bleeding vitally needed capital away from construction and maintenance. Their recommendation was to defer payment, at least until the exchange rate improved. Both Hays and Hanna resisted, however, on the grounds that any attempt to renege on taxes, particularly the local taxes, would damage the company's reputation.[31]

The company made one attempt to escape municipal taxation, by claiming that, because title to all its land was still held by the Dominion government, it was still Crown land and, therefore, exempt. The courts, however, took a different view. In the case of R.M. McLean No. 96 vs. The Southern Alberta Land Company, the courts held that the company's ownership of the land was not in question, and ruled in

favour of the municipality. The judgement forced the company to accept its tax load as best it could.[32] By 1924, it owed $171,127.75 in outstanding taxes.

F.W. Hanna's term as General Manager was dedicated to the pursuit of two different strategies to release the company from its financial burden or the project from its economic morass. The first lay in attempts to sell the project, a step forced on the company by its debenture stockholders, who were prepared to continue operations only if the various governments released 80% of their charges against the project and the possibility of its sale was pursued.[33]

Although overtures were made to a number of private concerns, notably the Canadian Pacific Railway, all were rejected out of hand. Neither general economic conditions nor the condition of the project itself held any attractions to companies seeking profit. Ultimately, the company had only two prospective buyers, the Dominion and Provincial governments.

In its approach to the Dominion government the company initially sought only to relieve itself of its debt and its most burdensome tract of land by offering to exchange the Suffield District for the cancellation of its loan and the recovery of other outstanding debts, particularly the tax load borne by that district. A figure of $400,000.00 was set, amounting to $3.25 per acre. The government, however, was not prepared to oblige. They considered that their security was adequate to protect the loan and thought that the purchase of land from private parties would set a bad precedent.[34]

The company then offered to sell the entire project to the government for $7,500,000.00. E.F. Drake, who had only recently resigned as Director of Reclamation Services, looked favourably on the idea. His arguments in favour of a government takeover were reminiscent of those which he had made during the receivership crisis of 1914 (see above, p. 96). He expressed no surprise at the company's insolvency and felt that it was only a matter of time before the government would be forced, under the North West Irrigation Act, to step in and take over the project. An alternative proposal, to reduce the obligations of the project and turn it into a government-assisted irrigation district, would be only a temporary measure, leading inevitably to government ownership. Likewise, if the company went into receivership, government funds would have to be used to keep the project operating until the company was either refinanced or declared bankruptcy. The former would only increase the company's debt to the Dominion government; the latter would leave the project in the government's control.

If the government were likely to be forced to take responsibility for the project, there were advantages in taking over immediately. It would, for example, ensure the continuous operation of the system, a boon to the farmers on the project, on whose behalf the government was obliged to act. Drake, therefore, recommended the purchase, unpopular though it would be in some circles, but thought that $5,000,000.00 was a more reasonable figure.[35] No decision was made on the matter, but coming events were to justify Drake's evaluation of the government's position.

The company's attempt to sell the project to the Provincial government was no more successful. The company proposed to convert the project into an irrigation district, financed by government-guaranteed bonds. The new United Farmer government refused even to consider the idea. The offer was brusquely rejected and no further approaches were entertained.[36]

Concurrently with his ill-favoured efforts to sell the project, Hanna pursued other means to reduce its obligations and increase its revenue production. He sought relief from bridge construction and maintenance along its canals. He asked the Dominion government for a reduction of rental charges on its reservoirs (the right-of-way and reservoirs had been held as Crown land and leased to the company since 1914). He looked to both governments for assistance in settling the project, particularly through the Soldier Settlement Board. He proposed a scheme to liquidate the project's arrears of taxes and to relieve it of future tax burdens, by relinquishing 245,000 acres of land in lieu of its present tax debt and the holding of all other company land by the Crown until sale, thereby releasing it from taxation.[37]

The federal government proved itself reasonably amenable to the proposals under its control. Reservoir rents were reduced to the grazing rate. The Department of the Interior's Reclamation Service recommended the project as a source for Soldier Settlement Board activities, and a couple of sales were achieved through the Board, but the government was not funding the Board sufficiently for it to be able to place many settlers on the expensive irrigation land.

On the company's tax avoidance scheme the Dominion government's advisors predicted provincial opposition. The provincial government proved obdurate on all points. Though L.C. Charlesworth, Chairman of the Irrigation Council, saw some merit in relieving the company of bridge maintenance and noted the likely consequences for taxation if the company failed and the project fell to the Dominion government's control, Premier Greenfield would not voluntarily relinquish the province's taxation powers and he rejected all proposals. He did not see that his government had any reason to forego its legal rights or had any responsibility to assist the project.[38]

The provincial government had, of course, established a responsibility for assisting irrigation development in the province. In 1915, the Liberal government had passed the Irrigation Districts Act in an effort to revive irrigation development after the period of private development had ended. In that Act lay Hanna's main hope to restore the revenue production of the project. The company had finally noted what William Pearce had observed in 1902, that the main canal was capable of supplying large tracts of land upstream from the company's holdings. If these tracts could be organized as irrigation districts, they could be supplied with water from the company's system, purchasing that right with funds obtained from the sale of government-backed bonds. The company proposed to sell the water right for $40.00 per acre. To avoid major enlargements of the system, expansion into the Irrigation Districts would occur at the expense of the Bungalow and Suffield Districts, which would be permanently excluded from the project. Removing those districts from the company's calculations was projected

to reduce the ultimate cost of the project by $1,220,501.00, which would, in turn reduce the cost per acre to marginally below the $40.00 per acre price which the company had set for the Irrigation Districts.

The company began, therefore, to promote the creation of several irrigation districts, including New West, River Bow, Eyremore, Retlaw-Lomond (also known as Lomond-Enchant, depending on canal schemes), North and South Retlaw (the latter becoming Sundial Extension), and Sundial (see Map 6). One, the Sundial Irrigation District, had been proposed as early as 1914. The Irrigation Branch of the Department of the Interior had responded to requests from the Sundial District to make use of the Southern Alberta Land Company canal, then standing idle, to supply water to an area hard hit by drought. It had established the feasibility of irrigating some 23,000 acres. At the same time, surveyors had explored the country north of the canal, which was later to become the proposed Lomond-Enchant district, and determined that some 70,400 of a 141,000 acre tract were irrigable. Neither project was pursued at the time, however, probably because of the good crop years and high prices which followed.[39]

Beginning in 1921, the district farmers began to organize themselves, under the encouragement and with the assistance of the company. Hanna attended meetings throughout the area, usually in the company of Dominion and Provincial government officials, providing district farmers with information about the company's role in the proposed development and promoting their efforts to organize.

In his endeavours, Hanna found his best ally in the Dominion government's Reclamation Service. The Service was charged with doing

land surveys to determine canal routes and irrigable acreage, but its reports were expanded to include an economic analysis as well. Total capital costs for the proposed districts averaged $55.00 per acre, which, when funded through bonds, would produce an annual charge of $7.00-$10.00 per acre per year on the district farmers. Estimates of productivity suggested that the annual costs could be successfully met.[40] On the basis of their reports, the Service gave the prospective Districts its unqualified support.

But the success of the districts depended, not on the Dominion government, but on the approval of the Provincial government. In a general way, the Provincial government had indicated its support for increased irrigation activity. In its report on the economic condition of the East-central dry lands the Alberta Survey Board made its strongest recommendations in favour of irrigation as the main strategy for recovery. But it then became cautious about implementation, suggesting that the Lethbridge Northern Irrigation District be properly running before any other projects were undertaken.[41] In its encouraging attitude towards the role of irrigation in southern Alberta, the report offered some hope, but in its specific proposals it reflected the government's own reluctance to become more deeply involved in irrigation development.

The province's reluctance was clearly evident in its negotiations concerning the New West Irrigation District. Although it was one of the smallest of the proposed districts, it was one of the easiest to supply from the company's existing system; hence, it was one of the cheapest to finance. The district's farmers had arranged a meeting on 23 June, 1921 to discuss the formation of the district. It was attended

by A.J. McLean, M.L.A. for the constituency and Alberta Minister of Public Works; E.F. Drake, Director of the Reclamation Service; L.C. Charlesworth, Chairman of the Alberta Irrigation Council; and F.W. Hanna. Hanna told the farmers, somewhat coyly, that

> while his company were [sic] not looking forward to taking on any additional troubles and that the delivery of water to an irrigation district meant more trouble for the operation and maintenance Department, they could be assured that the Company would assist them in every manner possible . . .

The provincial representatives assured the farmers of financial assistance, the Dominion government of free surveys.[42] The District was formed in March, 1922, after the Dominion study had established its practicability.

By then, however, the Liberal government in Edmonton had been replaced by the United Farmers of Alberta, who proved themselves much less willing to provide direct government support for development schemes. Negotiations with the government on the financing of the district were difficult. The province sought to reduce the district's capital requirements by insisting that the company accept an annual water charge, rather than a cash payment. To the company such a method would make it a money-lender to the district. The charge of $40.00 per acre was a capital expense for works already constructed and paid for, not an operating cost. V. Meek, Assistant Director of the Reclamation Service, accepted the company argument and sought to convince the Province of the justice of the company position, but Greenfield and V.W. Smith, provincial Minister of Railways and Telephones, were adamant, so negotiations dragged.

Many of the province's demands were predicated on its uncertainty about the survival of the company. The province demanded an undertaking from the Dominion government that it would operate the system if the company failed. Notwithstanding its legal obligations under the North West Irrigation Act, which it cited, the Dominion government was loathe to make specific commitments on hypothetical matters.[43]

Pressure was also placed on the company to reduce its water charge. New West asked for a reduction to $30.00 per acre, well below the company's calculated cost. The province placed a limit of $6.00 per acre per year on district obligations, predicated on a reduction of the company's capital charge. Hanna responded with an offer to accept payment by installments over seventeen years, yielding an annual charge of $3.24 per acre per year. He insisted that the government guarantee payments.[44] The province then insisted that the water charge be paid in the form of tax credits, as a condition for agreeing to the installment plan.[45] Finally, on 21 February, 1923, the company and the provincial government agreed to a cash payment of $31.00 per acre, with a maintenance fee of $1.25 per acre per year. Eighty percent was to be returned to the province to cover tax arrears.

The government's hard dealing was influenced by a number of factors. They had no confidence that an arrangement with the Canada Land and Irrigation Company would survive if the company failed. They were also unwilling to become embroiled in another costly endeavour like the Lethbridge Northern Irrigation District, whose rocky history had generated a major inquiry into its management, a refinancing crisis in 1920, and continued calls on the government purse. But it was also

representative of a different attitude in the U.F.A.'s provincial administration. In all areas of the province's economic development, the U.F.A. government drew back from the Liberal initiatives, refusing to use government as an agent of development. The government was dedicated to cautious, conservative administration, the philosophy of self-reliance and the goal of holding the line.[46]

The New West Irrigation District proved to be the only district created. All the others became mired in government resistance. Even the N.W.I.D. produced little disposable income, because of the tax payment provision. The company's financial condition continued to deteriorate. No further investment capital was forthcoming from Britain. In 1924, when the company missed the second consecutive interest payment on its 7% Prior Lien debentures, the debenture holders threw the company into its second receivership in ten years. On 17 February, 1924 James B. Sutherland of George A. Touche and Company, Galgary, took possession of the project for the Receiver, E. James Bennett. On 15 February, the company had total debts of $550,742.87 and cash on hand of only $15,973.63, insufficient to pay for the 1924 irrigation season.[47]

In his report to the Receiver on the Company's position, Hanna expressed the hope that the project would not be permitted to close down during the company's difficulties, because it might never be restarted. He looked to the Dominion government to support the project until it could be sold or refinanced.[48] The hopes of the water users lay in that direction as well. The farmers had been watching the company decline into financial impotence ever since their arrival in

the project, putting up with delayed water deliveries, cranky works and hand-to-mouth operation of the system. By the 1923 season it was obvious to everyone that the company was unlikely to survive another year, and the farmers were unlikely to continue unless their own financial obligations were adjusted and they protected their interests in the project. Therefore, on 1 December, 1923 the Canada Land and Irrigation Company Contract Holders' Association was formed. In a petition approved at the meeting, the forty-one members declared their confidence in the capacity of the project to create a secure and prosperous agricultural community, but for the severe overpricing of the land. They had bought when wheat prices were high; wheat production could not sustain them under the new pricing regime. Most of them had insufficient capital to venture into more reasonable uses for irrigated land, such as feed crops and stock raising. Distance from markets was a great obstacle to the sale of their best crop, potatoes.

The petition called for a major readjustment of their obligations to the company, including cancellation of all interest charges from 1920 to 1926, application of all payments to principal, deferral of all payments on principal to 1926, and general reduction of land prices to $45.00 per acre for irrigable land, $5.00 for dry land, at 6% interest.[49] Hanna felt that the company could not even consider the first three proposals, that a price reduction could only occur if there were a major reduction in the capitalization of the project, but that the interest adjustment had merit.

The onset of receivership effectively deferred any long-term efforts to re-align the obligations of the farmers. The first order of business was to ensure that water was available for delivery at the beginning of the irrigation season, in an atmosphere where authority was extremely confused. Hanna sought a $60,000.00 loan from the Dominion government to carry on, but was refused.[50] Bennett's receivership was challenged by other debenture holders and the courts finally appointed C.C. Baker on 12 May, 1924. On 31 May, 1924 Hanna resigned as General Manager, leaving his duties in the hands of J.W. McLane.

Technically, the project was already in the hands of the Dominion government. The company's construction deadline had run [illegible] had not been extended; its reservoir leases had lapsed, [illegible] Receiver declared his inability to deliver water, the Contract Holders Association combined with the New West Irrigation District to form the Amalgamated Water Users Association and sought out D.W. Hays, now a land holder in the area, to represent it in seeking assistance from government to operate the project. It also appointed trustees empowered to collect rent and hire crew. The Association required $15,000.00-$20,000.00 to construct a flume in the troublesome Little Bow Section to get water to the project from Lake McGregor. Although the assistance was finally granted, the weeks of confusion delayed water deliveries until July and the crops suffered.

To prevent similar difficulties, C.C. Baker proposed, on 21 February, 1925, that the Department of the Interior, already acting on the behalf of the farmers, operate the project as agent of the

Receiver, with full power to manage, expand, collect revenue and sell land, without reference to the Liquidator. All government expenditures would be a first charge on the land. Charles Stewart, Minister of the Interior, accepted, agreeing to act as agent until 31 March, 1926.[51] In this way, the Dominion government took a major role in efforts to reconcile the numerous obligations which threatened the project's survival.

The Department set up a Committee, made up of V. Meek for the government, D.W. Hays for the farmers, and J.W. McLane for the company, to recommend modifications to the land contracts and propose solutions to the project's financial distress. The Contract Holders cited the failure of the Lethbridge Northern's settlement program with land priced at $55.00 per acre and the discounts, as low as $23.00 per acre, being offered in the C.P.R. districts as proof of the need for massive reductions. They proposed $35.00 per acre; the Committee settled on $50.00 per acre, with contracts stretched over twenty-five years. Even that price was insupportable unless the capitalization of the project and the charges against it were considerably reduced. It recommended that taxes, of which it cited a multiplicity, be reduced to figures comparable to the earning capacity of the farms and that the arrears be funded over a period of years. The Dominion government should accept the reversion of the Suffield and Bungalow Districts as payment of its debt.[52]

Although it took another two years to reach agreement among all the contending parties, the Committee's recommendations became the basis of the project's reorganization. The Provincial government,

always the most obstinate of the participants, was finally persuaded to compromise on its taxation rights by the prospect that, with the approaching transfer of the natural resources, it might be left responsible for the project. Under two agreements, the Canada Land and Irrigation Company returned the Suffield, Bungalow and part of the Alberta District to the Dominion government, extinguishing a $514,115.35 debt by the transfer of 257,058 acres. It relinquished a further 10,565 acres to the provincial government in exchange for a reduction of its tax debt to $100,000.00, which was to be funded over fifteen years beginning 1 December, 1929. The Province cancelled all outstanding taxes on land reverting to the Crown. The Company promised to raise $100,000.00 and retain all revenues for Canadian operations until 50,000 acres were sold.[53]

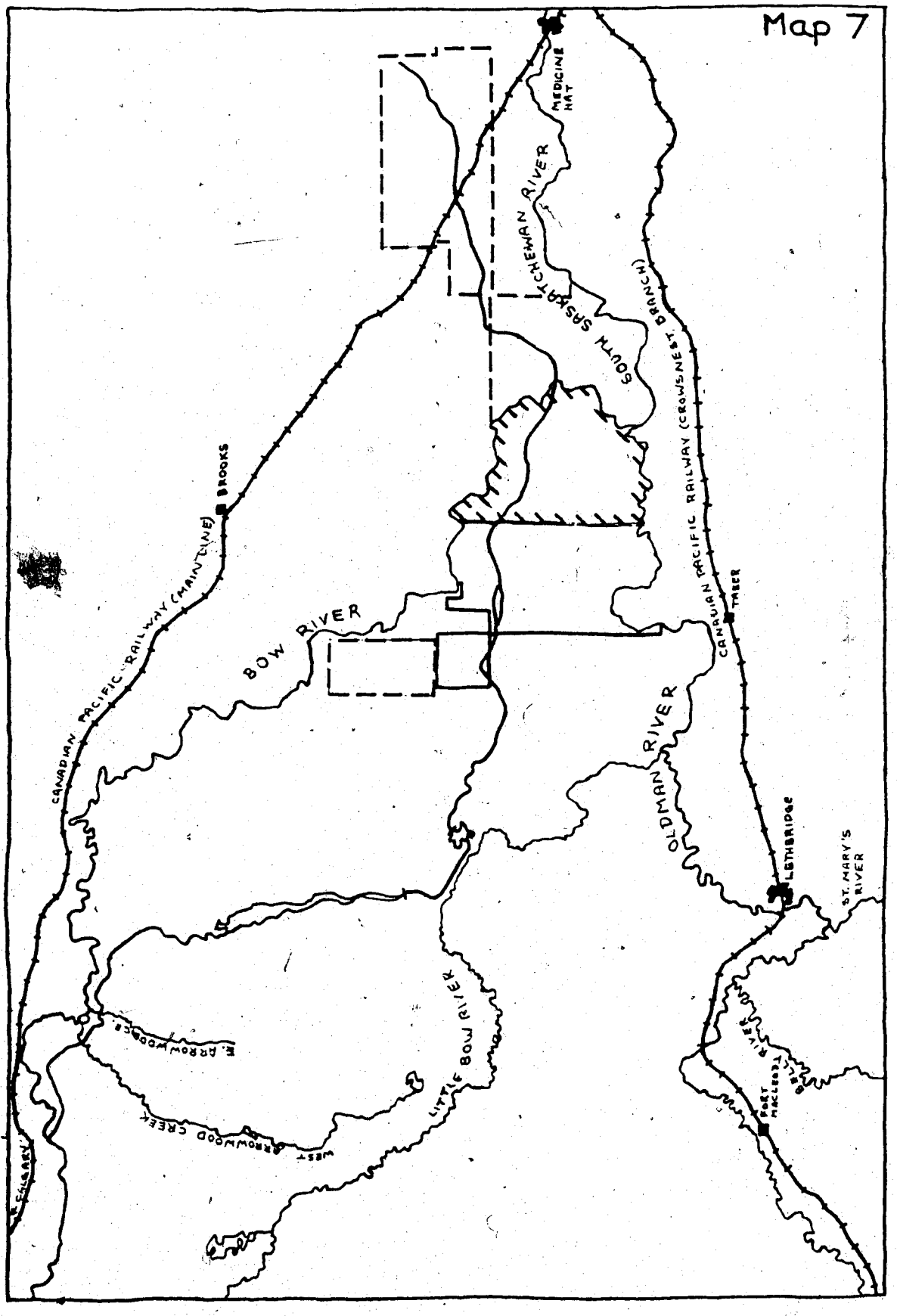
The arrangements restored the project to company control on 26 July, 1927. The project had been reduced to 221,454 acres, entirely located west of the Bow River, accessible to irrigation works already in place (see Map 7). Control of the company was in the hands of the Prior Lien and 6% Debenture stockholders, who had a combined interest of £745,000 ($3,546,200.00) in the project. The transfer of property and works and the cleansing of debts had reduced the liabilities significantly. Much of the Company's assets had also been written off by the reduction of the land prices and re-allocation or cancelling of interest. The price reduction, the institution of crop-share agreements and the return of prosperity had, however, re-activated land sales. The government sold 8,357 acres of irrigable land during the receivership; the Company sold some 5,988 acres in its first year after retaking

MAP 7

Lands lost by the company, 1927-1942

Lands returned to Dominion
and provincial governments, 1927

Land seized under Tax Recovery
Act, 1941


Map 7
MEDICINE HAT
LYCHEWAN RIVER
SOUTH SASKATCHEWAN RIVER
CANADIAN PACIFIC RAILWAY (CROWSNEST BRANCH)
BROOKS
CANADIAN PACIFIC RAILWAY (MAIN LINE)
BOW RIVER
TABER
OLDMAN RIVER
LETHBRIDGE
ST. MARY'S RIVER
LITTLE BOW RIVER
WEST ARROWWOOD CREEK
E. ARROWWOOD

control. The annual tax bill was reduced from $56,872.00 in 1926 to $14,403.00 in 1927.[54] The financial crisis was over.

The experience of the company in operating the project from 1918 to 1924 was hardly surprising in light of the tremendous difficulties which it faced. Accumulated financial and structural burdens and poor economic and climatic conditions combined to doom the company's efforts to market and operate the project in a systematic, profitable manner. Overburdened with capital investment and debts, and underutilized by the small number of economically insecure farmers, the financial collapse was inevitable.

What is significant about the period was the late, and reluctant, participation of both the Dominion and Provincial governments. The Dominion civil service, particularly, recognized that the arrival of farmers in the project significantly altered the government's position vis à vis the project. The interest of farmers in proposed irrigation districts confirmed that the project could no longer be viewed as indistinguishable from the company. The Dominion government accepted its role as protector of the interests of the water users during the receivership, but it was not yet ready to undertake a permanent responsibility for the operation of the system. The project, therefore, reverted to company control as the only available means of continuing it. The expectations of present and prospective users still existed, however, which would demand a broader view of the project's status than that to which it had reverted.

Footnotes

1. Report by Sir William Plender . . ., op. cit.

2. Tentative forecast, assets and liabilities, based on disposal of land in 1935, 1917, Canada Land, ff. 196.

3. No land sales goals were officially stated in 1917, but in 1920 the company set goals of 12,000 acres in 1920, 15,000 in 1921, 22,000 in 1922, and 25,000 per year until disposal. Remarks re expenditures and receipts, 1 January, 1920, ibid., ff. 311.

4. The company later produced more optimistic forecasts, but this represents the first officially stated recognition that the company was aware of its poor prospects.

5. Proof sheets, Land Department promotional leaflet, 7 July, 1919, Canada Land, ff. 287.

6. Correspondence concerning interim water agreements, January and May, 1918, ibid., ff. 250.

7. Hedges, pp. 297 and 304.

8. Medicine Hat Times, 13 January, 1910; Lethbridge Herald, 15 September, 1909.

9. The branch line was not completed to Blackie, providing a western route to Calgary, until 1930.

10. Figures obtained from monthly progress reports to London, 1918-1924, Canada Land, various files.

11. Correspondence concerning Sifton Option, June-August, 1920, ibid., ff. 311 and 627.

12. Constituency fact sheets, Alberta, 1922; in Alberta, Legislature Library Historical Collection, 74.1/312. PAA.

13. Monthly progress report for August, 11 September, 1918, Canada Land, ff. 269.

14. Monthly progress report for December, 1919, 9 January 1920, ibid., ff. 309.

15. Progress report for June, 1922, 7 July, 1922, ibid., ff. 376.

16. Correspondence concerning dry land contracts, January-October, 1922, ibid., ff. 412.

17. See Mackintosh, pp. 69-74.

18. Alberta. Report of the Alberta Survey Board. (Edmonton: King's Printer, 1921).

19. Progress report for July, 1920, 23 August, 1920 and August, 1920, 14 September, 1920, Canada Land, ff. 309.

20. Progress report for June, 1922, 7 July, 1922, ibid., ff. 376.

21. Ibid.

22. V.C. Fowke, The National Policy and the Wheat Economy, Toronto: UTP, 1957, p. 75; E.S. Hopkins, et al. Soil Drifting in the Prairie Provinces, (Ottawa: Department of Agriculture, 1937), p. 48.

23. Fowke, ibid.

24. Statutory declarations, 1920-1950, Canada Land, ff. 548-552.

25. Land sales files, 1912-1950, ibid., ff. 628-700.

26. Interview with J.D. Fairless by W.L. Jacobson, [24 October, 1958], RCT-90-3. GAI.

27. Memorandum, n.d., Canada Land, ff. 446.

28. G.F. Herbert to Charles Hobhouse, Chairman, Canada Land and Irrigation Company, 19 November, 1920, ibid., ff. 311.

29. Telegram, Charles Hobhouse to W.J. Challis, 12 August, 1920, ibid.

30. Constituency fact sheets, op. cit.

31. G.F. Herbert to D.W. Hays, 19 November, 1920; Hays to Herbert, 19 November, 1920; F.W. Hanna to W.J. Challis, 14 November, 1921, Canada Land, ff. 311, 354.

32. R.M. McLean no. 96 vs. Southern Alberta Land Company, 1912-1917, Alberta, Attorney-General, Lethbridge Supreme Court, Civil case docket no. 1636. PAA.

33. Telegram, W.J. Challis to Medicine Hat, 18 April, 1923, Canada Land, ff. 486.

34. Correspondence concerning sale of project, January-September, 1922, ibid., ff. 411 and 487.

35. E.F. Drake to J.B. Challies, Acting Director, Reclamation Service, 16 November, 1923, Water Resources Branch, ff. 192-2005-7.

36. F.W. Hanna to Herbert Greenfield, 2 December, 1921; L.C. Charlesworth to Herbert Greenfield, 24 January, 1924, Alberta, Premier's Office Papers, ff. 474. PAA.

37. F.W. Hanna to Reclamation Service, 27 August, 1923, Canada Land, ff. 486.

38. L.C. Charlesworth to Herbert Greenfield, 24 January, 1924; Greenfield to Hanna, 2 February, 1924, Alberta, ibid.

39. V.W. Meek, Inspecting Engineer, to F.H. Peters, [1914], Water Resources Branch, ff. 212-2434-1.

40. Correspondence files, Irrigation Districts, Water Resources Branch, ff. 213-2434, 280-3809, 296-4434, 299-2221, 299-4621, 302-4724.

41. Report of the Alberta Survey Board, op. cit., pp. 23-25, 27.

42. Memorandum and report concerning irrigation district, W½ 14-16 W4, n.d., Canada Land, ff. 418 and 1150.

43. E.F. Drake to W.W. Cory, Deputy Minister of the Interior, 8 November, 1922, Water Resources Branch, ff. 280-3809-1.

44. F.W. Hanna to W.J. Challis, 18 December, 1922, Canada Land, ff. 1150.

45. Memorandum by L.C. Charlesworth, 4 January, 1923, ibid., ff. 419.

46. See Susan Kooyman, "The policies and legislation of the United Farmers of Alberta Government, 1921-1935". (M.A. Thesis, University of Calgary, 1981).

47. F.W. Hanna to James Sutherland, 21 February, 1924, Canada Land, ff. 470.

48. F.W. Hanna to E. James Bennett, 27 February, 1924, ibid.

49. Canada Land and Irrigation Company Contract Holders' Association to Company, 1 December, 1923, ibid., ff. 1235.

50. Charles Stewart, Minister of the Interior, to F.W. Hanna, 14 April, 1924, ibid., ff. 472.

51. C.C. Baker to Charles Stewart, 21 February, 1925; Charles Stewart to C.C. Baker, 9 March, 1925, Water Resources Branch, ff. 192-2005-9.

52. Committee Report on the Canada Land and Irrigation Company, 1925, Canada Land, ff. 507.

53. Memorandum of agreement, 12 January, 1927; agreements, Company and Alberta Minister of Municipal Affairs, 15 April, 1927; Memorandum of agreement, Company and Canada Minister of the Interior, 31 May, 1927, ibid., ff. 859.

54. Chairman's speech, ordinary general meeting, Canada Land and Irrigation Company, 1 August, 1928, ibid., ff. 494.

Chapter 5 Depression and War, 1929 - 1945

The project which was returned to the control of the Canada Land and Irrigation Company in 1927 was greatly transformed from that which it had lost three years earlier. It was reduced to less than one-half its former area. Stripped of all the land east of the Bow River, which had never been a realistic part of the project, the company had been relieved of a constant drain on its finances and future worries concerning its development. What was left was a project virtually completed, requiring only the construction of laterals to supply the farms and the upgrading of many of the structures, which had deteriorated badly, both from age and neglect.

The company regained control of the project in an economic climate which was also transformed. The recovery of wheat prices and the restoration of economic buoyancy combined with the incentive of the new contract conditions to create, at last, a market for the project's land. The sharp reductions in expenditures and the expectation of expanding revenues suggested, for the first time, that the project could flourish.

Optimism concerning the project was not translatable into optimism concerning the company, however. The company had been forced to write off $952,618.80 in assets and accounts receivable in order to be relieved of $747,642.78 in crippling debts. It had also, as a consequence, written off its common shareholders. Projections of the system's finances indicated that sufficient revenue would be generated to pay off the Prior Lien debentures and 71% of the 6% Debentures. No

funds would remain to provide any return for the company's long-suffering stockholders.[1]

Though the company was now in the hands of its Debenture holders, the project was no longer fully under the control of the company. The agreement which had been signed with the Minister of the Interior had subtly isolated the project from the company's direct control. The agreement had called for the deposit of $100,000.00 in Canada, to be used entirely for construction and operation of the project. It had prohibited the withdrawal of funds from Canadian operations until 50,000 acres had been sold. The project was to be managed according to an engineering report prepared in November, 1926, setting out expected receipts and expenditures, the allocation of funds and the expansion of the irrigation system. The report had been prepared by D.W. Hays. It had been to Hays that the project's farmers had turned during the first year of the receivership and it was Hays who had operated the project for the Dominion government during the time that it acted as agent for the Receiver.

It is likely that the confidence shown in Hays by both the farmers and the Dominion government was the critical factor in the company's choice of Hays, rather than J.W. McLane, as the new General Manager of the revived project. But Hays' appointment reinforced the isolation of the company's officers from the details of management. Hays was dedicated to the project and was interested in making it a successfully operating irrigation system. His ambition did not necessarily mean that the company would benefit. To a considerable degree, the company's officers found themselves in the role of passive observers, dependent on Hays' good management to produce the hoped-for returns.

The engineering report on which Hays based his activities anticipated sales of 10,000 acres per year over twenty years. Expenditures, primarily committed to integrating that amount of land into the system each year, were expected to outstrip revenues until 1930, accumulating a deficit of $151,310.00. As the increasing amount of occupied land began to return greater revenues, profits would be generated by the project for the first time. Initially, these would be turned back to pay off the deficits of previous years, but eventually, the project would be able to return money to London, repaying its "A" Prior Lien stock in 1939, its "B" stock in 1944, its "C" stock in 1955, and a final payment to its 6% Debenture holders in 1966, the expected termination date of the company's interest in the project.[2]

In the early years Hays was able to operate the project in a manner which suggested that the projections were not unrealistically optimistic. Although he approached the magic figure of 10,000 acres in sales only once, in 1930 (see Table 8),[3] the level and momentum of sales activity were cause for optimism when compared with the failure of the early 1920's. By carefully balancing the expansion of the system to the level of sales, Hays was able to obtain a small profit in 1927 and remain below the projected deficit until 1932 (see Table 9).[4] There were however, ominous signs of trouble from even the earliest year of operations. Revenues failed to match expectations due to unexpected declines in the value of crops grown and the failure of sales to reach projections, which slowed the rate of revenue growth.

By 1930, the onset of the Depression began to demolish all of the company's projections. Ironically, 1930 produced the best year for

TABLE 8

AMOUNT AND VALUE OF LAND SALES, 1926-1949

YEAR	NO. OF SALES	TOTAL ACREAGE	IRRIGABLE ACREAGE	VALUE OF SALES	CONTRACTS CANCELLED	ACREAGE CANCELLED
1926			(2,740.00)			
1927	47	6,731.65	5,617.53	280,700.00		
1928	49	7,591.63	6,203.08	275,800.00		
1929	18	2,364.75	1,807.17		13	1,910.05
1930	49	9,104.27	6,266.25	308,400.00		
1931	24	3,922.20	3,258.52	171,800.00		
1932	3	410.54	386.17	21,200.00	4	
1933	OFL 8	718.04	601.24	29,500.00		
					45	6,400.00+
1934	OFL 26					
	2 2				18	
1935	OFL 26					
	11 14					
1936	OFL 40				11	(1933-36)
	4 4				2	
1937	OFL 37	6,315.00	4,543.00		15	
					1	
1938	OFL 58				9	
	50 50				67	
1939	OFL 15				11	
	24	3,586.75		68,000.00	4	
1940	OFL 30	5,497.07	3,322.21	89,670.00	5	
	7 7	1,321.39	840.41	22,280.00	1	
1941	OFL					
	1 2	200.00		3,920.00		
1942	OFL 13	2,702.85			17	3,592.85
	8 8	1,250.96	721.96	20,470.00		
1943	OFL 21	4,254.70			16	2,529.43
	17 19	3,506.44	2,354.23	63,060.00	7	1,072.00
1944	OFL 13	2,178.57			12	1,802.05
	10 13	2,173.96	1,105.90	30,340.00	2	
1945	OFL 26	4,992.62			21	3,838.37
	29 35	5,423.00	3,980.31	100,240.00	3	
1946	OFL 16	2,850.11			7	1,291.89
	4 9	1,389.54	860.44	24,260.00	1	
1947	OFL 13	2,803.89			3	640.00
	46 51	10,191.89	6,895.08	171,880.00	1	
1948	OFL 13	2,359.65			4	765.60
	13 16	2,738.70	1,844.97	43,600.00	3	
1949	OFL 17	3,422.49			4	770.49
	13 16	3,348.18	2,172.20	53,040.00		

From 1933 first line is Option Farm Lease, second is contract. Number below "OFL" in contract line is number of contracts converted from option farm leases.

TABLE 9

FINANCIAL PERFORMANCE OF PROJECT, 1927-1949

YEAR	RECEIPTS	EXPENSES	PROFIT/LOSS	PROFIT/LOSS ESTIMATED	CUMULATIVE DEFICIT	COST CONSTRUCTION	SURPLUS w/o CONSTRUCTION
1927	118,773.42	118,395.51	+ 377.91	+ 98,755.00	10,493.22		
1928	123,672.56	173,498.84	- 49,826.28	+ 37,985.00	60,319.50		
1929	160,931.17	169,401.42	- 8,470.25	- 5,030.00	68,789.75		
1930	75,371.05	114,831.58	- 39,460.53	+ 954.00	108,850.28		
1931	73,589.11	100,856.82	- 27,267.71	+ 4,680.00	135,517.99		
1932	49,720.08	89,168.08	- 39,447.57	+ 13,540.00	(174,965.56)		
1933	40,659.87	89,262.50	- 48,602.63		223,568.19	255,371.58	31,803.39
1934	62,778.36	66,130.00	- 3,351.64		242,262.88	257,417.55	14,776.96
1935	82,036.08	98,505.78	- 16,469.70		234,291.64	264,484.72	30,193.06
1936	102,870.09	180,750.19	- 77,880.10		225,013.25	339,703.54	115,690.29
1937	140,019.22	116,992.23	+ 23,026.99		195,567.09	362,754.33	167,187.24
1938	123,963.66	147,942.47	- 23,978.81		219,037.57	397,810.22	178,772.65
1939	104,853.17	115,490.95	- 10,637.78		225,063.16	425,277.62	200,214.16
1940	71,207.69	105,369.03	- 34,161.34		223,136.90	441,205.77	186,211.92
1941	104,862.87	118,885.13	- 14,022.26		261,561.27	452,112.06	190,550.77
1942	90,107.12	109,025.70	- 18,918.58		252,435.01	461,000.21	208,565.20
1943	151,391.95	90,555.84	+ 60,836.11		187,082.29	466,548.55	279,466.26
1944	218,649.64	93,479.47	+125,170.17		*109,861.61	473,314.93	413,453.32
1945	193,078.22	142,060.00	+ 51,018.22		#178,240.92	525,261.67	405,990.43
1946	189,697.66	143,990.00	+ 45,707.66		124,632.23	568,971.37	496,193.91
1947	197,021.55	164,160.65	+ 32,860.90		=278,715.53	607,982.11	568,065.55
1948	272,325.00	173,798.74	+ 98,526.26		&122,687.43	642,567.94	701,178.13
1949	297,842.63	231,302.79	+ 66,539.84		!202,986.20	740,743.56	865,693.89

*Includes remittance to London, $50,000.00
#Includes remittance to London, $120,000.00
=Includes remittance to London, $100,000.00
&Includes remittance to London, $25,000.00
!Includes remittance to London, $100,000.00

land sales to date, forcing heavy expenditures to expand the system at a time when revenues were already collapsing. The value of crops produced on the project plummeted (see Table 7). The declining returns from crop production reflected the drop in the price of wheat, on which the farmers were still very dependent for income. The Wheat Pool pay out fell from $1.185 per bushel for No. 1 Northern at Fort William in 1929 to $.67 per bushel when the Pool ceased in 1932.[5] The project's continuing dependence on wheat left it particularly vulnerable, just as it had during the price decline after 1920.

Crop yields also suffered. Despite abundant and efficient application of water, fierce hot spells at critical periods damaged crops severely. The combination of poor yields and low prices hurt farmer and project equally, for neither could survive on the meagre income from the annual harvests. For the project, collections from contracts were $95,000.00 below expected levels in 1930; the company's cash balance was reduced to only $2,620.85.[6] The project faced future capital expenditures which could not be long deferred even if expansion ceased. Many of the structures, particularly the timber flumes and syphons, needed to be repaired or replaced if water supplies were not to be interrupted.

After 1930, sales figures began to drop, reflecting the poor economic prospects of farming and the revision of land prices in the Lethbridge Northern Irrigation District, as a result of the Wilson Commission study.[7] Aggravating the decline in sales, contract holders began to quit. Between 1932 and 1934, sixty-seven contracts were cancelled, representing 35% of the contracts written since 1927.

Cancellations represented a double peril for the project. The abandonment of land removed any hope, however poor, of obtaining revenue. It also added to the project's tax burden, not only through the restoration of current taxes to the company's account, but often by the addition of tax arrears accumulated by the farmer. The departure of farmers drained the already shrinking revenues and increased the demands on available funds.

Hays took drastic steps to avoid the perils of abandonment, further risking revenue levels in order to prevent a total collapse. In 1932, all interest on principal was waived if the principal was paid by November, a practice which was repeated in subsequent years. Crop shares were reduced from 1/3 to 1/4 in 1933. Two-for-one credits were applied on both water agreement payments and land interest. Water rental was rebated on all land summerfallowed to kill weeds. Interest on arrears was reduced from 10% to 6%. Any payments made ahead of schedule were also credited two-for-one.[8] Each of these concessions produced further declines in revenue. By 1936, the company had written off $328,068.29 through such measures. Hays hoped to control the amount of revenue loss by granting relief, rather than risk more serious losses by insisting on total payments.

None of the fiscal measures could be more than palliatives, applied in the hope that better conditions would correct the existing difficulties. The one truly beneficial innovation introduced by Hays was the Option Farm Lease, which altered the procedure for selling land. Under the Option Farm Lease, a prospective purchaser entered into a lease on a parcel of land, which was worked on a 1/3 or 1/4 crop share

for one season. At the end of the season, the company could allow the lease to lapse if the farmer's performance was unsatisfactory, renew the lease if the farmer showed promise but needed more time to get established, or enter into a purchase contract and water agreement. The scheme permitted the farmers to test the farming and business prospects before committing extensive capital, and allowed the company to examine the farmer's ability before entering into a contract. It was the first occasion in which purchasers were accepted primarily on the basis of their ability to farm successfully on irrigated land.[9]

The Option Farm Lease was remarkably successful. Between 1933, the year of its introduction, and 1949, the company entered into 372 Option Farm Leases (see Table 8). During the same period, 270 contracts were signed, of which 215 were conversions from Option Farm Leases, representing 79% of all contracts signed during the period and 57% of all Option Farm Leases. The rate of contract cancellations declined sharply, with the exception of 1938, when 58 contracts were converted to Option Farm Leases. Thirty-six percent of all Option Farm Leases were cancelled between 1933 and 1949, compared with 42% of contracts between 1927 and 1932. Even the Option Farm Leases which were cancelled produced some revenue from land which would otherwise have lain idle, accumulating taxes. No other measure was as effective in restoring the momentum of the project and providing a long-term strategy for completing the sale of the project's land.

Not even the introduction of the Option Farm Lease was able to prevent the economic dislocation of the Depression. Therefore, in combination with efforts to stabilize revenue and restore sales, Hays

was forced to implement severe reductions in expenditures. He totally abandoned the projections of the 1926 Engineering Report after 1932. Necessary structural repairs and replacements were delayed year after year, but their deterioration militated against such cutbacks. Serious damage to weakened structures often forced expenditures which could not be afforded, as well as delaying the delivery of water at critical times. Wages of employees were also reduced and deferred until harvest in most years.

Hays was also forced to defer taxes, including payments on the funded tax debt remaining after the re-organization in 1927. Taxes were accruing not only on the company's unsold land, but also on land repossessed, which usually brought with it heavy arrears, as well. The province proved co-operative in alleviating the tax burden. It relinquished the remainder of the funded debt in return for the transfer of another 28,628.22 acres of land,[10] and agreed to postponements of taxes in 1932 and subsequent years. But the acquisition of a growing debt of tax arrears was hardly desirable over the long term and Hays sought substantial reductions in taxes. He argued that the arrears of taxes on repossessed land should be cancelled, since the company had no power to enforce payment on its contract holders and should not, therefore, be held responsible for their negligence. He cited the policy operating in the Lethbridge Northern Irrigation District as a precedent.[11] He objected to the raising of assessment on land as it became connected to the irrigation system, since the availability of water did not increase the revenue value of the land until it was sold and producing.[12] He also complained of the taxation practices of the

School Districts, who, he claimed, set mill rates capable of producing revenue far in excess of requirements. By doing so they were allowing for defaults. They raised their required revenues by overtaxing the conscientious rather than undertaking the trouble of dunning the defaulters. Hays called for the readjustment of school taxes to reflect actual needs and their systematic collection from all taxpayers.[13]

On these points the government proved less co-operative. Provincial officials consistently refused to look on the project as equivalent to an Irrigation District. It was the property of a private company, subject to all the duties and responsibilities of such a firm, no matter what the hardships. Nor did the provincial government take any steps to relieve the local authorities, for whom the economic difficulties were a spur to such tactics as that described above. The company's arrears continued to accumulate, presenting a growing obstacle to recovery. In 1937, despite the cancellation of $41,538.83 (of which, more below), the company was forced to fund its debt under the Tax Consolidation Act, 1927.

In order to survive, Hays needed extensive financial assistance, particularly to commit to repairs and rebuilding of structures along the main canal. Although he obtained a remittance of $10,000.00 from London in 1932, it was the last money from that source and only sufficient to restore cash reserves temporarily.[14] In 1934 and 1935 Hays was forced to borrow money from the Provincial government to cover operating expenses until harvest.[15] Until 1935 no other sources became available, but in that year the R.B. Bennett government introduced the "Bennett New Deal", which included the passage of the Prairie Farm

Rehabilitation Act in April. With an initial budget of $750,000.00 and promises of future budgets as high as $1,000,000.00 per year, the Act had, as part of its role, the specific mandate to assist in the development, repair or extension of stock watering and irrigation works.[16]

Hays took immediate steps to tap the new source of funds. He requested of the Water Development Committee sufficient funds to effect the long-delayed repairs and improvements, about $65,000.00, and a further $85,000.00 to cover operating costs for a year.[17] His application was supported by L.C. Charlesworth, of Alberta's Water Resources Office.[18]

On 4 September, 1935 Hays was able to report to the company directors that his application had been recommended by the Water Development Committee.[19] It called for a grant of $117,000.00, to be used for the rehabilitation of the project to 31 August, 1937, providing the Province would also assist to the extent of cancelling the project's tax debt.[20] Its recommendation was based on the project's expansion potential, the experience of the farmers, and the agricultural success which they had achieved. The Committee also expressed its confidence in Hays' ability to manage the grant efficiently and to bring the project to a condition of self-sufficiency. The new Social Credit government confirmed its administration's agreement to cancel the company's tax debt.[21] Bennett expressed his own lack of enthusiasm for the proposal,[22] but did not, at first, block it. By Order-in-Council P.C. 2952 the Committee's recommendations were approved in full.

The agreement between the company, the Minister of Agriculture, and the Water Development Committee set out the detailed allocation of the funding. First priorities included the repayment of loans accrued for operation and maintenance, amounting to $25,000.00, $12,792.60 to be paid to school districts and municipalities to cover taxes to the end of 1934, $2,090.00 to clear a debt with Beaver (Alberta) Lumber, Ltd. and to cover reservoir rents, and $18,000.00 for construction of works. The remainder of the fund would be supplied as work progressed. The company was obliged to use local labour and Canadian materials, guarantee maintenance and uninterrupted delivery of water, and to contract with the Committee to supply water for the Lomond or Retlaw Irrigation District.[23]

Then, on 14 October, 1935, Bennett's Conservative government was defeated in the general election. Within days, the outgoing cabinet reversed its decision, issuing instructions to cancel the funding programme.

> Council has directed that this report be referred back to the Department of Agriculture with the comment: "Declined. This project was destined to failure, - 'was a promotion scheme'".[24]

No reason for the reversal was provided, but Bennett's long memory concerning the tawdry origins of the project obviously militated against any understanding of the project's present condition, or of his own department's intentions concerning it.

Hays was promptly assured by the new Minister of Agriculture, Gardiner, that assistance would be provided by the Liberal [illegible]nt,[25] but all negotiations were to be done again. The Liberals

also proved less open-handed than the Conservatives. Initial proposals called for only $60,000.00-$80,000.00 as a grant, with subsequent assistance being provided as loans. Even the grant money could be made subject to repayment if the project became solvent.[26] But the most serious difficulty was raised when the Minister made the reduced grant conditional upon the results of a Commission to be established to investigate the land price structure in the project.

Despite the many concessions which the company had granted since 1932, the project's farmers had grown increasingly dissatisfied with their economic difficulties. As early as 1933, representatives of the Contract Holders' Association had sought provincial government support for demands to lower the contract price of their land. They contended that many of the company's concessions, such as the interest rebate and the two-for-one credits, required money to obtain benefits, and that money was simply not available. Only a real reduction of obligations could produce real benefits for the farmers. If the provincial government offered assistance to the project, it had the right to impose conditions.[27]

The provincial government denied any obligation to assist, or interfere in, the project's operations, but efforts to gain price reductions had continued. In 1934 the Canadian Pacific Railway took steps to turn over all of its lands and works to the Eastern Irrigation District's farmers, with only a nominal price for unsold land.[28] Hays recognized that the transaction would support the pressure already being applied on the company to effect reductions. The reduction in land prices in the Lethbridge Northern Irrigation District in 1931 had

already created competitive pressures. But Hays did not see how the company could comply. It operated under constraints not shared by its rivals. The Canadian Pacific Railway obtained secondary benefits from traffic generated by its irrigation works to compensate it for its direct losses. The Lethbridge Northern escaped much of the tax burden which drained company resources and had, as well, the ultimate support of the provincial government. Hays recognized that the company should be prepared to sell the project soon and that it should make the proposal before a purchaser appeared, using the C.P.R. arrangement as the basis for an offer.[29] The company's directors were unwilling to pursue the proposal, however, under present economic conditions. A purchase backed by government guaranteed bonds, given the financial burdens of the Province, seemed unsafe.[30]

Now the farmers had succeeded in tying their demand for price revisions to the Dominion government's assistance programme. They had claimed, correctly, that the government assistance was being provided to assist them and they declared that they could benefit most from a general reduction in prices.[31] Hays attempted to convince the government that the company had been sufficiently helpful in voluntarily granting benefits which had reduced the company's revenues by $300,000.00,[32] but the government was insistent that the rehabilitation of the project include a consideration of the economic prospects of the farmers.

Finally, Hays was able to reach an agreement for an $80,000.00 grant ($60,000.00 for construction, $20,000.00 for maintenance) on the same terms as the previous agreement with the Conservatives. Future

assistance was to be contingent on price revisions.[33] Hays agreed to support the farmers' request for a commission only if the commission examined all irrigation projects in the province. The provincial government was willing to participate in the investigation, but the Dominion government balked at being involved in the wider inquiry. It was concerned only with the Canada Land and Irrigation Company project and claimed to have no interest in the rest of the irrigation projects. To qualify for future assistance, the company had to agree to a revision of its land prices, irrespective of the price structure in the rest of the province. Hays then objected to having the price structure of the project determined by a provincial inquiry, more interested in its own project (i.e. the Lethbridge Northern) than the company's. The summer of 1936 wore away while the company, the Contract Holders' Association, the Province, and the Dominion sought a compromise. Finally, the Dominion Minister of Agriculture agreed to appoint one member of the three-man Commission and to pay for that portion of the Commission's expenses taken up with the company's business.[34]

The Commission, chaired by Justice A.F. Ewing and including F.A. Wyatt of the University of Alberta's Department of Soil Science, and Roy W. Risinger, a Lethbridge farmer and the Dominion's appointee, reported on 5 May, 1937. It recommended setting irrigated land prices, including the right to water, at $20.00 per acre for land 70% irrigable. Payment should be on a crop share basis. The Commission based its recommendations on an evaluation of the land and conditions in the Lethbridge Northern Irrigation District. Its further recommendation, that the financial burden of reducing the price structure in the

Irrigation Districts should be borne by the province as a whole, merely pointed out once again the disadvantage of the Bow River Project's corporate structure. The company was left to bear all of the burden of its price reductions. The Commission also recommended that the New West Irrigation District, which had been almost totally depopulated, be integrated into the company's operations.[35]

On 14 May, 1937 Hays met with representatives of the company's Contract Holders' Association, the Lethbridge Northern Irrigation District, the New West Irrigation District, and the United Irrigation District to discuss the implementation of the Ewing Commission recommendations. The water users wanted the new prices to become effective as of the 1936 fiscal year. Hays offered two alternatives; either implementing the new rates as of 1 March, 1936 without 1936 concessions or at 1 March, 1937, with 1936 concessions. The main question, however, was the manner of crediting existing equity to the new contracts. It was readily agreed that no contract which was already paid up would be considered and that anyone whose payments, less interest, exceeded the new price would be granted title but no rebate. Hays felt that anyone whose payments did not cover the accrued interest on his existing contract had no equity, but resistance to his proposal led to a postponement of decision on that point. For contracts in arrears on water rental, with little payment of principal, the rental would be carried over as a liability, with equity calculated if arrears were less than two years old; the contract would be quit claimed in exchange for an Option Farm Lease if there had been defaults or arrears exceeding two years.[36] In 1938 the Crop Payment (Irrigation Land Sales)

Act was passed, implementing the Ewing Commission recommendations. Under those revisions the company wrote off $940,089.11 in accounts receivable and accepted 58 quit claims, in exchange for Option Farm Leases.

Although some improvements in the project's finances were apparent as early as 1935, the company's deficit continued to rise. Receipts began to rise consistently, but were overwhelmed by maintenance costs. In 1937, the main canal required enlargement and repairs to older laterals were needed. In 1938 maintenance costs were $11,000.00 over estimates due to the cost of cleaning drifted soil from the canal system. That year also brought tax increases, which the project was unable to pay. It also brought an increase in tax arrears of $19,000.00 from the conversion of contracts to Option Farm Leases.

By 1940, the company was unable to fulfill the requirements of its tax consolidation agreement. Its failure caused yet another crisis in the project's affairs, because Alberta's Department of Municipal Affairs responded by seizing 150,000 acres of the project under the Tax Recovery Act, 1922. Hays protested vehemently. He had frequently complained that the company was being unfairly treated by taxing authorities. The company's arrears had been bloated through no fault of its own; rather, through inheritance from repossessed land. The 1940 default was particularly galling because the provincial government, through its enactment of the Ewing recommendations, had added arrears to the company's debt, as part of the exchange of contracts for Option Farm Leases.[37] The company's position had been further aggravated by the imposition of war-time delivery quotas on wheat, which had reduced the

company's crop-share receipts. Hays thought that the circumstances of the company's default warranted consideration.

The Department proved hostile to the company's case. Requests for the cancellation of inherited arrears had been ignored. The seizure, itself, had occurred with no prior warning that the Department was dissatisfied with the company's attempts to keep current. Requests to extend the tax consolidation agreement, once the seizure had occurred, were refused. Hays then proposed an arrangement to settle the conflict. As of 31 December, 1940 the company owed $41,748.19 in arrears and $14,416.23 in current taxes; a total debt of $56,164.42. Hays proposed that the province cancel approximately $20,000.00 in taxes, for which the company claimed it should not be held responsible. The company would pay approximately $20,000.00 in taxes on the land under consolidation. The remainder would be covered by a transfer of land selected by the Province from areas suggested by the company. The proposal was presented at a meeting attended by Hays; William Aberhart, Premier; Lucien Maynard, Minister of Municipal Affairs; and Nathan Tanner, Minister of Lands and Mines, who was responsible for the Special Areas, one of the authorities to whom the company was indebted. Hays' proposal was rejected.[38]

No explanations were ever provided to the company for the Department's seizure or for its intransigence, nor is it possible to discover any from available government records. Hays suspected that the government was using the Tax Recovery Act to establish a provincially-controlled irrigation project already built, but communications with Tanner, who seemed to have some sympathy for the

project's difficulties, dispelled that theory.[39] The attitude of the provincial Department of Agriculture provided more evidence that the trouble was not due to a general Cabinet decision. P.M. Sauder, Director of Water Resources, intervened vigorously on the company's behalf. He expressed concern that nothing be done to jeopardize the company's ability to deliver water, because the government would then be forced to take over the works. The occupants would be likely to expect major improvements which neither the province nor the federal government could finance during the war. He also pointed to the public benefits provided by the company, which made it worthy of concessions on the payment of its taxes.[40]

Maynard was probably motivated by a strict adherence to legality. The company was in default, therefore the province had the right to resort to Tax Recovery proceedings. He was not disposed to listen to company excuses or proposals for a settlement or to offer proposals of his own. Instead, he pushed forward with the appropriate steps for tax recovery, staging a public auction of the seized land in May, 1941. His eventual decision to bargain with Hays was due to the latter's persistence, Tanner's mediation within the Cabinet, and, not least, to the fact that the auction generated no offers. Even then, Maynard was not prepared to be conciliatory. Hays sought the cancellation of $54,360.66 in arrears in return for the payment of 1941 and 1942 current taxes, approximately $18,000.00, and the right of redemption of land under the Tax Recovery Act by payment of the tax debt within three years or at $1.00 per acre after three years. Maynard countered with a demand for $20,000.00 to be deposited immediately as an act of good faith, and

called for the company to cancel all arrears of interest on its land contracts and to credit its cancelled taxes to the accounts of its contract holders. He also demanded quit claims on all land under the Tax Recovery Act, which would then be redeemable only by purchase, at $2.00 per acre.[41]

The Province's counter offer was blatantly hostile. It attempted to remove the company's statutory right to redeem its seized land by paying the tax debt. Furthermore, the price set for its recovery was almost seven times the tax debt. Under Maynard's proposal, the company would be charged $340,791.78 to recover land on which there were taxes due of $89,649.70.[42] The company was also expected to relieve its debt load by a method which would deplete its earning capacity.

Maynard's inflexibility forced the company to reach agreement very much on his terms or face abandonment of the project and liquidation. In January, 1943 a draft agreement was prepared. It called for the payment of $20,000.00 towards the company's tax arrears. The government would cancel the remainder of the debt to 31 December, 1941, the amount to be credited to all contract holders in proportion to their debts to the company. The company retained the right to redeem the land held under the Tax Recovery Act for three years by paying the tax debt, for a further five years by paying $2.00 per acre.[43] At the last moment, Maynard insisted that the company include its mineral rights in the transfer of land. Hays protested that the mineral rights were not at issue, all mineral taxes being paid up, but Maynard threatened to reject the entire agreement unless the company submitted. Under such duress the company had no choice but to consent.[44]

The tax agreement reduced the company's holdings in the project to 83,305.864 acres, of which 54,224.145 acres were under contract, and 28,100.069 acres were still to be developed. About 12,000 acres of the undeveloped land was irrigable.[45]

The financial difficulties brought on by the accrued tax arrears and aggravated by the imposition of delivery quotas in 1940, concealed real improvements in the financial condition of the project as the war progressed. The wheat quotas began, at last, to force a shift away from wheat production in the project, toward hay and coarse grain crops. The shift was part of a process of diversification which stabilized and improved crop values throughout the last decade of the company's ownership (see Table 7). With the exception of 1942, when the project experienced heavy hail damage, the company's revenues also improved (see Table 9). It was able to pay current taxes out of receipts without incurring arrears from 1942 onwards. In 1943 it realized its first profitable year since 1927; receipts continued to top expenditures in subsequent years. Between 1944 and 1949, Hays returned $395,000.00 to London, the first payments returned to the company's head office since the project's inception.

Without doubt, the Depression and early war years were difficult for both the project and the company which operated it. Only the intervention of the Dominion government after 1935 and the alienation of more than 30,000 acres in lieu of taxes, had permitted operations to continue. Hays' willingness to compromise the company's revenues in order to prevent the depopulation of the project was also of considerable importance to its survival. The introduction of the Option Farm Lease

had not only helped to keep farmers on the land, it had sustained a level of settlement that could hardly have been expected under the economic conditions of the 1930's. The project had, in fact, survived the Great Depression rather better than it had the less severe post-war depression of the early 1920's, no doubt primarily due to the rationalization which had occurred in 1927.

The performance of the project after 1940 was heartening, despite the strain caused by a hostile provincial government. The project established its ability to operate in a stable, profitable manner. The company, however, was in no better position to develop the project's potential than it had been before the Depression and steps were already underway to provide an alternative structure within which to expand the project.

Footnotes

1. Chairman's speech, ordinary general meeting, Canada Land and Irrigation Company, 1 August, 1928, Canada Land, ff. 494.

2. Ibid. The company's 7% Prior Lien Debenture Stock had been divided into three classes as part of the reorganization in 1927. Fourth Supplemental Trust Deed, Canada Land and Irrigation Company and Metropolitan Co. Ltd., 27 July, 1927, ibid., ff. 550.

3. Progress reports, 1926-1949, ibid., ff. 851-856.

4. Ibid.

5. Fowke, p. 246.

6. Progress Report for 1930, 10 February, 1931, Canada Land, ff. 852.

7. Progress Report for 1931, 10 February, 1932, ibid.

8. Progress Report for 1933, n.d., ibid., ff. 853.

9. Ibid.

10. Order-in-Council 146/33, Alberta, Executive Council Papers, 70.427. PAA.

11. Correspondence concerning taxation, 1929-1939, Canada Land, ff. 1189.

12. Correspondence between E.G. Macdonald, Attorney, and W.D. Spence, Chairman, Alberta Assessment Commission, December, 1930 to January, 1931, ibid.

13. D.W. Hays to A.R. Soutter, Deputy Minister of Municipal Affairs, 10 July, 1936, ibid.

14. Progress Report for 1932, 10 February, 1933, ibid., ff. 852.

15. Agreement, Canada Land and Irrigation Company and Government of Alberta, 27 April, 1934; L.C. Charlesworth to D.W. Hays, 4 September, 1935, Alberta, Dept. of Agriculture papers, ff. 88. PAA.

16. G.E. Britnell, The Wheat Economy, (Toronto: UTP, 1939), pp. 227.

17. D.W. Hays to W.A. Jacobson, Secretary, Water Development Committee, 20 August, 1935, Canada, Department of Agriculture Papers, ff. 3287-559-13-9-1. PAC.

18. L.C. Charlesworth to D.W. Hays, 23 August, 1935, Canada Land, ff. 509.

19. D.W. Hays to A.J. Reddaway, Secretary, Canada Land and Irrigation Company, 4 September, 1935, ibid.

20. Memorandum concerning Canada Land and Irrigation Company, 10 September, 1935, Canada, Agriculture, ff. 3287-559-13-9-1.

21. Ernest Manning, Provincial Secretary, to E.S. Archibald, Director, Dominion Experimental Stations, 12 September, 1935, ibid. Charlesworth's initial support came only the day after the Social Credit victory.

22. R.B. Bennett to D.W. Hays, 7 September 1935, Canada Land, ff. 509.

23. Agreement, Canada Land and Irrigation Company, Canada Minister of Agriculture and Water Development Committee, 23 September, 1935, Canada, Agriculture, ff. 3287-559-13-9-1.

24. Order-in-Council of the Privy Council, P.C. 2952, 21 October, 1935, ibid.

25. D.W. Hays to London, 16 November, 1935, Canada Land, ff. 509.

26. E.S. Archibald to Deputy Minister of Agriculture, 24 January, 1936, Canada, Agriculture, ff. 3287-559-13-9-1.

27. L.C. Charlesworth to John Brownlee, Premier, 24 January, 1933, Premier's Office, ff. 475.

28. The final price was $500,000.00 for a project valued at $19,000,000.00. D.W. Hays to A.J. Reddaway, 25 February, 1935, Canada Land, ff. 508.

29. D.W. Hays to A.J. Reddaway, 30 November, 1934, ibid.

30. A.J. Reddaway to D.W. Hays, 21 December, 1934, ibid.

31. Colin Dewhurst, Secretary, Canada Land and Irrigation Company Contract Holders' Association, to D.W. Hays, 26 November, 1935, ibid., ff. 509.

32. D.W. Hays to J.G. Gardiner, Minister of Agriculture, 24 February, 1936, ibid.

33. Agreement, Canada Land and Irrigation Company and Canada Minister of Agriculture, 11 April, 1936, Canada, Agriculture, ff. 3287-559-13-9-1.

34. Correspondence concerning Ewing Commission, April, 1936 to March, 1937, ibid.

35. Alberta. Legislative Assembly, Sessional Papers, No. 61, "Report of the Commission appointed the 19th of August, 1936 to enquire into various phases of irrigation", 70.414. PAA.

36. Minutes of meeting to consider Ewing Report, 14 May, 1937, Canada Land, ff. 509a.

37. D.W. Hays to Lucien Maynard, Minister of Municipal Affairs, 8 April, 1941, ibid., ff. 1190.

38. Correspondence concerning meeting to discuss Tax Recovery proceedings, 16-26 May, 1941, ibid., ff. 1220, 1225, 1226.

39. D.W. Hays to A.E. Pratt, Secretary, Canada Land and Irrigation Company, 29 May, 1941; John L. Helliwell, Accountant, to D.W. Hays, 5 June, 1941; H.R. Milner, Attorney, to D.W. Hays, 7 October, 1941; ibid., ff. 1222.

40. P.M. Sauder to A.R. Soutter, Deputy Minister of Municipal Affairs, 12 May, 1941, Alberta, Agriculture, ff. 88.

41. Correspondence concerning Tax Recovery, 22 November, 1941 to 22 June, 1942, Canada Land, ff. 1222.

42. D.W. Hays to Lucien Maynard, 26 March, 1942, ibid., ff. 1220.

43. Draft agreement, Government of Alberta and Canada Land and Irrigation Company, January, 1943, ibid., ff. 1222.

44. R. Martland, Lawyer, to D.W. Hays, 3 February, 1943, telegram, London to R. Martland, 4 March, 1943, ibid.

45. Progress Report for 1942, 27 January, 1943, ibid., ff. 855.

Chapter 6 Sale of the Project

By the beginning of the Second World War the Canada Land and Irrigation Company was the last private corporation still developing an irrigation system in western Canada. The other companies which had undertaken irrigation ventures at the turn of the century had disposed of their land and were, at most, acting only as operators of the main canals for their respective projects. The Alberta Railway and Irrigation Company, acquired by the Canadian Pacific Railway in 1912, was supplying water to 120,000 acres of land, the maximum possible capacity from the St. Mary's River at that time.[1] The C.P.R. had virtually completed its land sales in the Western Irrigation District by 1920 and was also acting only as a canal operator for the project. The Eastern Irrigation District had been transferred to a farmer-controlled board in 1935.

Of these projects, only the Alberta Railway and Irrigation Company project recovered its construction costs from its land sales.[2] It is likely that not even it showed a profit on all expenses: construction, operation, maintenance, and selling costs. But the Canadian Pacific Railway, beneficiary of freight generated by productive farms in the projects, was able to write off its direct losses and bow out of irrigation development.

The Canada Land and Irrigation Company, too, had no hope of recovering the millions of dollars invested in the Bow River Irrigation Project, and obtained no subsidiary benefits from its development. Even though the project earned regular profits after 1942, the company

was accomplishing no more than the gradual decrease of the project's accumulated deficit. It was unlikely, after the economic dislocation of the Depression, that even the returns expected under the 1927 arrangement would be realized.

Furthermore, if the company wished to complete the sale of its unoccupied lands, a new round of capital investment was required. Old and decrepit structures had to be replaced just to keep the system operating. More importantly, the water-carrying capacity of the entire main canal had to be enlarged. When first constructed between 1909 and 1912, the canal had had a capacity of 1200 cubic feet per second, but over the years silting and canal bank subsidence had reduced its capacity to only 600 cubic feet per second, sufficient to supply only 50,000 acres.[3] Hays estimated that $38,000.00 would be required to supply water to the 12,000 acres of irrigable land left in the company's possession after the settlement of its tax debt in 1943.[4] More would be needed if the company attempted to redeem the land lost under the tax agreement. The company had not the resources to finance the project's renewal and expansion.

Hays had been examining the difficulties under which the project operated and considering alternatives for many years. He had focussed his attention on the project's burden of capital costs. As early as 1933 he had begun to isolate the construction costs incurred by the company and to note the effect they had on the project's profitability (see Table 9). His point was obvious; relieved of its construction costs, the project could be run as a stable, profitable operation. The project could not pay for its own development.

Hays was not alone in pointing out the difficulty faced by projects which attempted to recover capital costs from land or water right sales. By the 1930's it had become obvious that the economics of irrigated agriculture could not support all the costs of development. Recognition of the economic limitations had been implicit in the reduction of land prices in the Bow River Project in 1926, the similar reduction recommended by the Wilson Commission for the Lethbridge Northern Irrigation District in 1930, and in the nature of the C.P.R.'s disposal of the Eastern Irrigation District in 1935. On none of these occasions had any consideration been given to the matter of who should accept the burden of capital costs if the farmers could not. The excess costs had simply been left to those who had made or guaranteed the initial investments; in the case of the Bow River Project, they had devolved on the company's common shareholders.

By the late 1930's, however, Hays and others had begun to advocate an alternative source of development funding. In what amounted to a total rethinking of the economic rationale for irrigation development, direct government financing was proposed as the logical source of capital. In its report on irrigation, the Ewing Commission had specifically recommended that the total capital cost of development should not be charged entirely to the land immediately benefitted.[5] In the case of the Lethbridge Northern Irrigation District, the costs not covered by the new land prices naturally devolved on the provincial government. The Commission considered that appropriate, in that the province received benefit from irrigation and should contribute to costs. The Commission did not, however, advance its observations as a

basic principle and the Bow River Project, still a private venture, was excluded from that recommendation.

Hays pursued the Ewing proposals in a report on the future of irrigation development.[6] In it he presented the new economic rationale in its complete form. It was based on the fundamental principle that irrigated agriculture provided economic benefits beyond the primary benefits accruing to the farmer. The farmers of irrigated land gained both short and long-term benefits from the stabilization, diversification and expansion of agricultural production. Improved productivity increased farm revenue, distributing benefits throughout society. Consumer spending by the farmers would rise, assisting the commercial sector within the immediate market area and beyond. The local tax base would increase and the burden of arrears and relief would be reduced. Improved productivity also contributed valuable goods to the gross national product of the country and increased income tax revenue. The economic benefit of irrigation was, therefore, shared by the farmers, the local community, local and provincial governments and the nation as a whole.

Hays suggested that the multiplier effect of irrigation was approximately five times the actual value of goods at the farm gate. Yet, the farmer, who realized only 20% of the total value of an irrigation system, was expected to pay the entire cost of its development. He cited the report of Walter Packard, written for the Columbia Basin Project in the United States, which proposed an allocation of costs under the new economic rationale. Packard proposed that responsibility for the cost of the project be divided among the

farmer-settlers (32%), the local, urban and regional interests, through taxation (37%), and the public-at-large, also through taxation (31%).[7] Using the Ewing Commission's recommended land price as the farmer's share, Hays calculated that such an allocation would provide $62.50 per acre to cover development expenditures.

Packard's proposal was, of course, concerned with financing a new irrigation project. Hays was looking for financial relief for a project already in existence. The Ewing Commission had established the farmers' share of the expenditure. From 1938 on, Hays looked for ways to obtain commitments from the provincial and federal governments to contribute their shares to the maintenance and expansion of the project.

Hays' appeals for tax relief, for example, though motivated by the company's financial distress, were based on the argument that the project should be treated like the government-supported Irrigation Districts. The provincial government was being asked to recognize its obligation to participate in the financing of the project at least to the extent of absorbing its tax debt. Therefore, while the tax debt of the 1920's had been extinguished by the transfer of company property, Hays expected tax relief without compensation in 1936 and 1941. On the former occasion, the provincial government had complied, but on the latter, it was unwilling to treat the project as other than a company asset, subject to the charges made on it by the government.

From the federal government Hays expected a more co-operative response. The government's commitment to irrigation development under the Prairie Farm Rehabilitation Act had become a permanent objective of the Department of Agriculture. The Department had made clear its

intentions concerning the Bow River Project by requiring the company's consent to supply water for projects outside its boundaries as part of the 1936 aid package. The only obstacle to the implementation of the government's new, interventionist mood, was the shortage of money to fund the numerous projects being brought to the government's attention.

One of these project proposals provided Hays with a vehicle to seek long-term government involvement in the Bow River Project's development. In December, 1937 the Medicine Hat Chamber of Commerce took steps to revive the idea of irrigating land east of the Bow River from the company's works, under the name, the Redcliff-Ronalane Irrigation Project.[8] At a meeting in January, 1938, attended by members of the Chamber of Commerce, Redcliff-area farmers, representatives of the Prairie Farm Rehabilitation Administration, D.W. Hays, F.W. Gershaw, former Liberal M.P. for Medicine Hat, and A.H. Mitchell, the sitting Social Credit M.P., the Chamber presented its proposal for the consideration of all interested parties.[9] It called for the extension and expansion of the company's main canal to bring 150,000 acres under irrigation on both sides of the Bow River; 70,000 acres of Crown land east of the Bow, 70,000 acres of company land and 10,000 acres of private land west of the river. It estimated the cost at $2,500,000.00

John Vallance, the P.F.R.A.'s director of water development, informed the meeting that the proposed scheme was too large to fund under existing P.F.R.A. regulations, but he believed that the project was worthy of consideration and indicated that methods of financing it might be found. The federal government would expect close co-operation

the Province, which now had authority over all matters concerning [illegible]ation, and the consolidation of all land under federal control, if were to be federally funded. The Chamber was advised to determine the attitude of both the Province and the Company towards the scheme and to submit a formal brief to the government.

Hays' attitude was totally supportive. The scheme had the virtue of calling on government financing to expand the existing system along its entire length, permitting the extension of irrigation to company, as well as public, lands. It also offered the company an opportunity to relieve itself of the obligation to maintain its main canal by transferring it to an authority which would reflect the new, enlarged project. Hays responded to the Chamber of Commerce inquiry by offering the use of its main canal to the Province in return for certain assurances.[10] Firstly, the company expected the province to pay for the expansion of the main canal to a capacity sufficient to provide for the public land to come into the project and a maximum of 110,000 acres of company land. The company would enter into a canal company with other participants to provide for the operation and maintenance of the main canal, to be paid for by a pro-rata tax on water users, based on water consumption. By this arrangement the company would be left to complete its land sales, relieved of the horrendous burden of construction costs and the maintenance of its long, complex and fragile main canal.

The Redcliff-Ronalane scheme provoked interest from all parties but no immediate commitment to pursue it on the part of the federal government. The attention of the P.F.R.A. was still focussed on the

urgent task of halting and correcting the disastrous effects of the drought and inappropriate farming practices over vast areas of the southern prairies. Bringing an end to soil drifting, reseeding land to grass, organizing Community Pastures, and assisting individual farmers to dig stock-watering dugouts were of more immediate concern despite the long-range rehabilitation value of irrigation development.

Numerous irrigation schemes also vied for the attention and funds of the P.F.R.A. as it began to undertake such work, particularly after 1938. Until the end of the Second World War, most irrigation work occurred in southern Saskatchewan, where little had previously been done, rather than in southern Alberta, where irrigation was already well developed. More than $1,600,000.00 was invested between 1935 and 1943 in the Cypress Hills, to bring Frenchman Creek, Swift Current Creek, Gap Creek and other water flows under control as sources for irrigation. In its first eight years of operation, the P.F.R.A. invested $3,535,611.17 in fifty-two large water development projects; 90% of which was spent on twenty-nine projects in Saskatchewan.[11]

Hays and the other promoters of the development settled down for a long period of lobbying. In 1942, pressed by the Alberta Department of Municipal Affairs over the company's tax arrears, Hays attempted to protect a portion of the project's unsold land by arranging for federal assistance. He encouraged the government to purchase 30,000 acres in the project's Central District for $400,000.00. George Spence, Director of the P.F.R.A., was keen to obtain the land, and F.W. Gershaw took up the matter with James Gardiner. Hays first proposed an advance of $80,000.00 as a credit on the land to be purchased, which would cover

the company's tax debt. Gardiner was interested but said that he could not raise the money under the existing war-time priorities.[12] Gershaw then sought assistance from the War Settlement Board, but the Board was not yet ready to start purchasing land and was, in any event, not inclined to purchase undeveloped land.[13] Hays then suggested that the government provide sufficient funds to cover the taxes for either the entire Central District ($25,336.65 on 94,191.93 acres) or on land selected by the government within the District ($10,125.79 on 39,341 acres) in order to protect them from seizure.[14] But these offers, too, were declared impossible.[15] Hays' failure to obtain federal assistance was a critical reason for his decision that the company must accept the Provincial terms, unfavourable though they were, and wait for the war's end.

The P.F.R.A. revived its interest in the project's expansion somewhat in anticipation of the end of the war. On 28 March, 1945, at a meeting with Premier E.C. Manning, provincial government officials and other interested parties, George Spence stated that the P.F.R.A. was ready to proceed with the extension of the company's canal to serve Redcliff-Ronalane. Hays had already confirmed his company's willingness to participate along the lines of its 1938 commitment, though with two additional provisions, to bring its position up to date. It asked for an agreement from the provincial government that none of the land held for redemption by the company would be otherwise disposed of. It also asked for the reimbursement of $96,978.00 which it had spent on its main canal since making its initial offer.[17]

Spence stated that the company's position was generally acceptable to the P.F.R.A. In response to an argument made by Roy Lee, M.L.A. for Taber, that the Ret[redacted]-Lomond project receive priority, because of its proximity to the main canal, relative simplicity of development, and the immediate benefit to established farmers, Spence assured the meeting that the project would be planned as a whole and expanded in the most efficient manner. He noted, however, that there were compelling reasons for giving the Redcliff-Ronalane scheme priority. The old company canal was still in position and in generally good condition. The land east of the Bow River was almost entirely Crown land, making it easy to control and providing a ready source of farms for the soldier settlement programme. Reservoir sites were available at a low development cost.[18]

On 6 January, 1947, Hays submitted a report on the Bow River Development, which had been authorized the previous September.[19] In it Hays set out the proposed schedule of development of the irrigation system. The project would eventually encompass 180,250 acres of irrigable land, of which only 55,000 acres were presently irrigated. The federal government would undertake the enlargement and extension of the main canal and the provision of reservoirs. The provincial government would pay for the construction of the distribution system in the Irrigation Districts which would be created. The company would be responsible for the laterals within its own boundaries. The entire programme was estimated to cost $4,015,660.00, an average cost of $22.28 per irrigable acre, which would be recoverable under the Ewing price structure.

The order in which land would be connected to the system was that preferred by Spence, and was in the company's interest, as well. The first unit of construction would supply the company's Central District and the Bungalow, Suffield and Redcliff Districts east of the Bow River. That stage would require the extension of the main canal across the river and the provision of storage reservoirs to serve the eastern districts. The second unit, requiring the enlargement of the entire main canal, would bring water to the irrigation districts west of the company's land, as well as the Ronalane-Cecil District, east of the Bow River (see Map 6).

On the basis of Hays' report, Spence declared himself ready to proceed as soon as the two agreements required to give effect to the programme of construction were signed.[20] The first was the tri-party agreement, allocating the division of responsibility between the two governments and the company; the second was between the company and the Province, guaranteeing the company's rights to redeem its land. Hays also requested that the latter agreement include a reduction in the redemption price; a request to which Premier Manning readily acceded, setting the price at $1.50 per acre. He also offered to compensate the company to the extent of $5.00 per acre for all land offered to veterans at $5.00 per acre below the company's going rate, as part of the Provincial Veterans Land Settlement programme.[21]

On 20 November, 1947, the provincial government signed both agreements and returned them to Hays for his signature and that of the Canadian Minister of Agriculture.[22] Throughout the previous summer, Spence had been pressing for the swift approval of the two agreements,

but once they were in his hands, he encountered objections from his own superior. James Gardiner re-introduced a demand first mentioned by Vallance in 1938. He balked over the unwillingness of the Province and the company to relinquish control over all land benefitting from the federally-funded construction programme, particularly since he rejected the Ewing price for land, which he considered to be uneconomically high.[23]

Gardiner announced that the project as it was envisioned was too expensive to finance under the P.F.R.A. vote. If it was to be built, it must be funded through the same Reconstruction programme which was to finance the St. Mary-Milk River Development and be placed in third priority behind S.M.R.D. and William Pearce's Red Deer River scheme.[24]

It was clear, however, that Gardiner was prepared to advance the development if the Province and the company consented to the transfer of a portion of their land to federal control. The Province readily agreed, but Hays was not willing to relinquish 25% of the company's undeveloped acreage, which was its last source of revenue.[25] Hays felt that the contribution of its main canal, which it valued at $4,000,000.00, was sufficient. He did not think that the company should be asked to subsidize the veterans' settlement programmes, nor did he think the Ewing price structure excessive.

Faced by the company's unwillingness to part with any of its land, Gardiner took steps to remove the company's interest in the development by buying its assets outright. The company made no objections of principle, since it was obviously the only means of facilitating the new development plans and providing the company with some final revenue.

Negotiations proceeded throughout 1949 and, on 14 July, 1950, an agreement was signed. The federal government acquired all the company's property as it stood on 31 March, 1941 (i.e. before the Province's tax seizure) for £728,745 ($2,250,000.00). If the company redeemed the land still held by the Provincial government, the price would be increased by £33,000 ($103,182.49).[26] With the signing of that agreement, the involvement of the Canada Land and Irrigation Company in the Bow River Irrigation Project came to an end.

During the course of its involvement, the Company and its predecessors invested over $15,000,000.00 in developing the Bow River Irrigation Project. In return for this massive investment, the project probably generated no more than $6,500,000.00 in revenue.[27] Of this only $2,748,182.49 (approximately £892,267.04) was ever returned to the British investors who had financed the venture. At the time of the project's sale, total capital (shares and debentures) stood at £2,808,058 ($13,625,860.83). In the final settlement of the company, the Debenture holders received only a portion of their investments. The shareholders got nothing.

As a commercial venture, then, the development of the Bow River Project was an undoubted disaster and demonstrated the essential failures of the federal government's irrigation policy, as it was devised in the 1890's, and of the economic rationale which supported it. The government had been motivated, albeit reluctantly, to provide for irrigation development because of its expected ability to open up large tracts of western land for settlement. It had been encouraged by promoters of irrigation within the Department of the Interior,

western politicians, farm groups, newspapers and entrepreneurs who were prepared to undertake the expense of irrigation construction. It was understood from the beginning that irrigation would, and could, be developed by private capital and repaid by the settlers who occupied the projects. The North West Irrigation Act of 1894 had made it clear that the government's financial commitment would be limited to paying for general surveys of irrigable land and water resources to ensure the efficient exploitation of the country's irrigation potential. The government adhered to that limited role until the economic and climatic crises of the Depression forced it to undertake irrigation development as part of its general rehabilitation commitment.

The willingness of private investors to undertake irrigation construction was based on a general optimism concerning the potential of western Canada's agricultural economy. It was assumed that the agricultural productivity generated by the efficient use of irrigated land would provide sufficient income to give the farmer-settlers a prosperous life, while paying the cost of irrigation construction, operation and maintenance. In promotional literature much was written about the diversification and expansion of crop production, but little study seems to have been made of the market forces which would affect the economics of irrigated farms.

The Alberta Railway and Irrigation Company and the Canadian Pacific Railway saw in irrigation an opportunity to obtain a maximum return from their land grants in southern Alberta, as well as the intensive occupation of that land, with its attendant traffic. Their interest was serious and their dedication to the production of

efficient, long-lasting systems was demonstrated by the quality of construction and operation of the projects. But the general atmosphere of economic boomerism, the easy patronage of the Liberal government and the lax application of government regulations by the Department of the Interior, also attracted interest from individuals more interested in short-term speculative profits than in long-term development profits. Those who promoted the Bow River Project cost it several million dollars and six almost totally wasted years. Speculative withdrawals and losses from careless construction added to the capital charges which would eventually have to be recovered from land sales, raising land prices far above expectations. The delays that resulted from the initial, poorly conceived land selection, the negotiations over exchanging land, and the initial period of unsatisfactory construction, lost for the company the benefits of the peak years of settlement before the First World War and the boom in grain prices during it. When conditions were best for selling land, the company was not ready to market it properly. By the time it was, after 1918, the demand for land was already declining and economic conditions were not conducive to selling, or farming, irrigated farms at the price levels needed to recover investment.

By opening land to sales at an inopportune time and at impossibly high prices, the project lost its capacity to provide for the settlement of its land. Sales were low to nonexistent during the first years. By the time the occupation of the project became more promising, from the late 1920's, much of the original territory had been relinquished to pay off debts. The company's inability to maintain its system properly

reduced its size even more. By the 1940's the project had reached its maximum capacity, supplying 50,000 acres, far short of its intended size of 220,000 irrigable acres.

The farmers who did contract to buy land in the project suffered alike from two periods of poor economic conditions and from the persistent financial instability of the company. They were dependent on continuous operation of the irrigation system, but the company's poor financial condition provided little assurance of continuity. Its difficulties had delayed the arrival of water until 1920, had caused critical water shortages during individual irrigation seasons, and had left the farmers, themselves, to operate the system in 1924. After 1927, although the company never again failed to deliver sufficient water on time, it could not guarantee at the end of one season that it would be operational the next. The hand-to-mouth operation of the project was a poor foundation on which to build a stable farming community.

In order to improve the dependability of the irrigation system and to realize the potential of the project, control had to be removed from the company. The change in public policy which eventually provided massive injections of public funds into irrigation development was long in coming. It had been looked for, in vain, by the company and certain departmental officials, as early as 1914; had, indeed, been proposed as an alternative to private financing in 1906. Tentative, reluctant steps had been taken by the federal government in providing a loan to maintain the project during World War I and in assisting the farmers to keep the system operating between 1924 and 1927. The

provincial government had also offered a potential source of government support through its Irrigation Districts Act, but difficulties with the Lethbridge Northern Irrigation District had virtually closed that option by the 1920's. The Irrigation Districts were, in any event, also expected to be self-supporting and suffered from the same economic realities which afflicted corporate enterprises.

Officials within the Department of the Interior had proposed government takeover as a solution to the project's difficulties in 1914 and 1923 and the company, itself, had proposed a government purchase in the early 1920's, but it took the calamitous events of the 1930's to force a change in political attitudes toward that kind of intervention. The decision to relieve irrigation projects from liability for capital costs ultimately permitted them to demonstrate their capacity to create productive, populous agricultural communities. The late development of more rational financial approaches to irrigation development cost millions of dollars in lost investments for Britain, years of delay in achieving full occupation of irrigable land, and persistent instability for the Bow River Irrigation Project and the farmers who occupied it.

Footnotes

1. Canada. St. Mary and Milk Rivers Water Development Committee. Report on further storage and irrigation works to utilize fully Canada's share of international streams in southern Alberta. (Ottawa: King's Printer, 1942), p. 34.

2. Ibid., p. 37; James B. Hedges, Building the Canadian West: the land and colonization policies of the Canadian Pacific Railway. (New York: Macmillan, 1939), pp. 393 and 396.

3. Bow River Development, engineering reports, op. cit.

4. Progress report for 1942, 27 January, 1943, Canada Land, ff. 855.

5. Alberta. "Report of the Commission appointed the 19th of August, 1936 to enquire into various phases of irrigation", p. 28.

6. David Walker Hays, "Economic Development for Irrigable Lands", n.d., Canada Land, ff. 1271.

7. Walter E. Packard, "Agriculture and the depression", Agricultural Engineering 13 (June, 1932):152-155.

8. Lethbridge Herald, 2 December, 1937.

9. Minutes of meeting concerning Redcliff-Ronalane project, 4 January, 1938, Alberta, Agriculture, ff. 73.307/88.

10. Hays' offer was phrased as though the Province would develop the project, although he was certainly aware that federal money would finance it. D.W. Hays to W.T. Bannan, Secretary, Medicine Hat Chamber of Commerce, 27 June, 1938, ibid., ff. 94.

11. Canada. Department of Agriculture, P.F.R.A., A Record of Achievement. (Ottawa: the Department, 1943), pp. 70-78.

12. F.W. Gershaw to D.W. Hays, 28 April, 1942, Canada Land, ff. 1223.

13. F.W. Gershaw to D.W. Hays, 29 April, 1942, ibid.

14. D.W. Hays to F.W. Gershaw, 2 May, 1942, ibid.

15. J.G. Gardiner to F.W. Gershaw, 14 May, 1942, ibid.

16. Ben Russell, Director, Alberta Water Resources to D.B. MacMillan, Alberta Minister of Agriculture, 29 March, 1945, Alberta, Agriculture, ff. 73.307/88.

17. D.W. Hays to George Spence, 10 January, 1945, ibid.

18. Ben Russell to D.B. MacMillan, 29 March, 1945, ibid.

19. "Report on the Bow River Development" by D.W. Hays, 6 January, 1947, Canada Land, ff. 860.

20. George Spence to Ernest Manning, 10 May, 1947, Premier's Office, ff. 1282.

21. Ernest Manning to D.W. Hays, 28 August, 1947, ibid.

22. Ernest Manning to D.W. Hays, 20 November, 1947, ibid., ff. 1538.

23. J.G. Gardiner to George Bainbridge, Secretary, Alberta Social Credit League, 22 November, 1948, ibid.

24. J.G. Gardiner to Ernest Manning, 18 March, 1948, ibid.

25. D.W. Hays to L.B. Thomson, Director, Prairie Farm Rehabilitation Administration, 7 September, 1948, ibid.

26. Agreement, Canada Land and Irrigation Company and Canada Minister of Agriculture, 14 July, 1950, Canada Land, ff. 531.

27. The estimate of revenue includes imputed revenue from the cancellation of the Canadian government loan in 1927 and of four cancellations of provincial tax debt in 1927, 1932, 1937, and 1943.

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APPENDIX

Rates of Exchange

During the years that the Bow River Irrigation project was owned by British investors, the exchange rate between the pound sterling and the Canadian dollar was of considerable importance, since it affected the amount of capital actually available to the company in Canada. No systematic collection of exchange rates for much of the period under consideration could be discovered, however. The Canadian Almanac listed only the par of exchange ($4.86 2/3), which was set in 1871, until 1922. Donald Patterson used a standard rate of exchange of $4.85 in preparing his study, British Direct Investment in Canada, 1870-1914. (Toronto: University of Toronto Press, 1976), p. xii.

However, my own research indicated that money was being exchanged at values which varied considerably from standard reference rates. The importance of the prevailing rate to the operation of the company has been referred to in the thesis (p. 126). I have, therefore, sought to establish the actual rate of exchange whenever a comparison was necessary, my source being usually the records of the company. Rates which were obtained elsewhere are indicated in the Table which follows.

TABLE 10

RATE OF EXCHANGE, £= $ CDN., AND SOURCES, 1906-1950

	The Canadian Almanac		Other Sources
1906			4.13 Canada Land, ff. 1
1907			
1908			
1909			
1910			4.375 Canada Land, ff. 489
1911			
1912			
1913	4.86667		5.00 Canada Land, ff. 21
1914			4.85 Canada Land, ff. 202
1915			5.00 R.L. Borden, ff. 167-RLB49-1
1916			
1917			
1918			5.00 Canada Land, ff. 196
1919			5.09 Canada Land, ff. 273
1920			4.00 Canada Land, ff. 311
1921			4.35 Canada Land, ff. 354
1922			4.40 Canada Land, ff. 371
1923.10.01	4.6361		
1924.10.01	4.4631		
1925.10.01	4.8375		
1926.10.01	4.8425		06.11 4.86 Financial Post
1927.10.01	4.8675		4.76 Canada Land, ff. 494
1928.10.01	4.8475		
1929.10.01	4.9112	Toronto	
1930.10.01	4.8545	Toronto	
1931.10.01	4.4750	Toronto	
1932.10.01	3.8025	Toronto	
1933.10.01	4.88	Toronto	

TABLE 10 - Continued

	The Canadian Almanac		Other Sources	
1934.10.01	4.8265	Toronto		
1935.10.01	4.967	Toronto		
1936.10.15	4.895	Toronto		
1937.10.15	4.9587	Toronto		
1938.10.15	4.8025	Toronto		
1939.10.16	4.47	Toronto		
1940				
1941.12.01	Buy 4.43 Sell 4.47	Montreal, Bank of Canada		
1942.11.09	Buy 4.43 Sell 4.47	Montreal, Bank of Canada		
1943.11.29	Buy 4.43 Sell 4.47	Montreal, Bank of Canada		
1944.11.29	Buy 4.43 Sell 4.47	Montreal, Bank of Canada	06.16	4.48 Financial Post
1945.11.26	Buy 4.43 Sell 4.47	Montreal, Bank of Canada		
1946.11.11	4.03	Bank of Canada		
1947.11.11	4.03	Bank of Canada		
1948.12.06	4.03	Bank of Canada		
1949.12.10	3.08	Bank of Canada		3.08 Canada Land, ff. 531
1950.12.10	2.9286	Bank of Canada		